

COUNTRY GUIDE

THE FARM MAGAZINE

GENERAL SCIENCES

Radiant Heating for Hogs

By-product Beef

Cross-Country Steeplechase

UNIVERSITY OF ALBERTA

APRIL

UNIVERSITY OF ALBERTA
EDMONTON, ALBERTA
CANADA T6G 2P5





"...our Gleaners are right at home in this Canadian wheat!"

DEAR MOM: All going well and we're in great shape. Finished Mr. Rogers' wheat today right on schedule, no sweat, and our Gleaners are right at home in this Canadian wheat! Tonight we move north. You know Dad and his pencil, always figuring? He showed me how we've been doing since we began back home in Texas. Boy! Sis can stop worrying about being able to go away to school this Fall—she's in! And Dad says our Gleaners paid for themselves before we left Oklahoma—how about that!

Funny when you live with machines the way we have with our Gleaners all these weeks, you begin to feel like bragging about them when you meet people. Like the old-timer that was really looking over my C^{II} the other day. He says: "How many inches of separating in your combine, Sonny?" I answered: "If you mean length—13 feet. If you mean area—49 square feet!" He wouldn't believe it till I showed him how Allis-Chalmers puts the cylinder way down front to make room for

Elephant Brand is available Now!

See your nearest dealer—ALBERTA

ACME	Frank L. Harriman
AIRDRIE	Walt's Sales & Service
ALCOMDALE	Falls Farm Equipment
ALHAMBRA	J. B. Killick
ALIX	Peterson's Service
ALLIANCE	J. W. Bateman
ANDREW	Imperial Motors
ATHABASCA	A. C. Hyde
BASHAW	N. J. Holt & Sons Limited
BASSANO	X. L. Feed & Supply Ltd.
BEAVERLODGE	Foster's Seed & Feed
BEISEKER	Beiseker Motors Limited
BENALTO	G. R. Lougheed
BENTLEY	J. E. Morrisroe
BERWYN	Berwyn Truck & Implement
BLACKFALDS	E. J. Wadey
BONNYVILLE	J. C. Fontaine
BOTTREL	F. S. Gathercole
BOW ISLAND	Bishop & Malo
BOYLE	Boyle Farm Supply
BRETON	B. F. Flesher
BROOKS	McCabe Grain Company Ltd.
BRUDERHEIM	Strong & Sons Ltd.
BUCK LAKE	Victor J. Miller
BYEMOOR	T. O. Martin
CALGARY	Crown Seed & Feed Ltd. 125-10th Avenue West
CAMROSE	Schnell & Barrie Limited
CARBON	Walter Schacher
CARDSTON	Wolff & Son Implement
CARMANGAY	Hubka Sales & Service
CARSTAIRS	J. A. Chrystal
CASTOR	F. H. Compton
CHAUVIN	G. G. Shantz Limited
CHETWYND, B.C.	Chetwynd Equipment Ltd.
CHIPMAN	Peter Stefura
CLANDONALD	Maik Brothers
CLARESHOLM	Henker Farm Equipment Ltd.
CLYDE	W. J. Von Loewenstein
COCHRANE	Whittle Implements
CONSORT	Central Garage
CORONATION	G. Bruggencate
CROSSFIELD	W. A. Hurt & Son
DAWSON CREEK, B.C.	Dawson Farm Service
DAYSLAND	E. J. Brown
DEL BONITA	D. O. Sommerfeldt
DELBURNE	Manning's Feed Service
DELIA	Wm. Gibson
DERWENT	Algot Implements
DEWBERRY	Mrs. I. W. Braithwaite
DICKSON	C. G. Christiansen
DIDSBUY	H. E. Oke
DONALDA	Donaldada Feed Service Ltd.
DRUMHELLER	E. O. Parry Auto & Farm Machinery Ltd.
DUCHESS	D. E. Berg (Mailing Address—Millicent)
EAGLESHAM	Arnold Wilde
ECKVILLE	Kasha Farm Supplies Ltd.
EDMONTON	Cunningham Fertilizers & Chemicals Ltd., 5920-103rd Street
EDSON	Adrian Maris & Sons
ELK POINT	Elk Point Sales & Service Ltd.
ELNORA	T. B. Thompson
ENTWISTLE	I. Brown
FAIRVIEW	Red Line Implements Ltd.
FALHER	Falher Truck & Implements
FORESTBURG	Oberg Farm Equipment
FORT MACLEOD	Tom Story
FORT ST. JOHN, B.C.	Foster's Seed & Feed Limited
FORT SASKATCHEWAN	Alderson McLeod Equipment Limited
GADSBY	W. F. Townsend
GALAHAD	Ernie V. Kuefler
GIBBONS	Knott Brothers
GLEICHEN	Gleichen Implants
GRANDE PRAIRIE	Jack Deltombe
GRANUM	C. P. Cox
HAIRY HILL	Orest Arechuk
HANNA	K. & B. Motors
HARDISTY	W. K. Drever
HAY LAKES	Maple Leaf Service
HAYNES	C. C. Baker
HEISLER	G. M. Martz Hardware
HERRONTON	R. G. Despas
HIGH PRAIRIE	G. F. Bishop Equipment Limited
HIGH RIVER	Wm. Howie
HILL SPRING	G. Harker
HINES CREEK	A. W. Coon
HOLDEN	Olsen & Armstrong
HUGHENDEN	Hughenden Motors
HYTHE	N. S. Inkster
INNISFAIL	Gordon E. Sparks
IRMA	P. E. Jones Company
JOFFRE	Ross H. Stewart

GET MORE FROM YOUR LAND WITH ELEPHANT BRAND

Produced by The Consolidated Mining and Smelting Company of Canada Limited

COUNTRY GUIDE

THE FARM MAGAZINE

Editor: DON BARON

Associate Editors:

CLIFF FAULKNER—Calgary, Alta.
PETER LEWINGTON—London, Ont.
ROGER FRY—Winnipeg, Man.

Home and Family Section:
ELVA FLETCHER
GWEN LESLIE

APRIL 1965

Last month Field Editor Cliff Faulknor traveled to Grand Forks, B.C., to see first-hand the plight of farmers who have lost their markets because of pesticide residues. His report begins on page 21 of this issue. It's a story that has implications for every farmer in Canada.

In addition to the above mentioned report, Cliff sent along the following comments which we pass along to our readers: "The pesticide problem has reached almost alarming proportions in many parts of the United States. Faced with having to support many dairy farmers for a year or more because of mere traces of DDT, heptachlor and dieldrin, the U.S. Government is likely to abandon its zero tolerance standard for milk and other dairy products sooner or later."

He went on, "A pesticide payment bill was passed by both U.S. houses last fall and provisions were made retroactive to January 1, 1964. However, for some strange reason, the legislation expired January 31 of this year. Another bill is pending to have the legislation extended."

The picture above indicates that the Canadian Government is taking the situation seriously too. It's a picture of a pig, which has been purchased by the federal government from one of the Grand Forks farms, and is to be used for further research into residues.

Other reports in this issue will bring readers the latest word on free stall housing for dairy cows, and on the growing popularity among feedlot men for steers of the dairy breeds.



[Guide photo]

Featured

18	A Limit to Farm Size
21	The Buck Stopped Here
22	Hogmen Try Radiant Heating
24	By-product Beef
25	Free Stalls Are Fine
26	Plan a Winter's Feed
28	The Power to Destroy
50	Cross-Country Steeplechase
67	It's Spring
69	A Handful of Stars (Fiction)

Every Month

5	Letters
13	Weather
14	Editorials
15	Guideposts
19	News Highlights
32	Livestock — Control Supplements with Salt
42	Soils and Crops — Soil Testing Comes of Age

58	Horticulture — New Program for Roadside Management
60	Buildings — Feedlot Location
61	Workshop
62	Poultry — New Poultry Products
64	Dairying — Set Up a Milk Pool
68	What's New
86	Rural Route Letter

Home and Family

70	Let's Think It Over
71	In a Big Family
72	House for Outdoor Living
74	In the Kitchen — Pies without Pastry
76	Patterns — Striding into Spring

77	Handicrafts
78	Your Children's Shoes
79	Young People
80	Boy and Girl
81	It's New
87	Washday Wiles

About Our Cover

Pictured is part of the purebred ROP Ayrshire herd of Wilf and Annie Houle who farm in the shadow of the lofty Selkirk Range near Creston, B.C. Their 95-acre Willann Farm supports a herd of over 50 cows through heavy fertilizer applications, irrigation and strip grazing.—Cliff Faulknor photo.

President: A. M. RUNCIMAN
Advertising Sales Manager: D. A. LOGAN

General Manager: J. S. KYLE
Circulation Manager: R. W. McGuire

Contents of this publication are copyrighted and may only be reproduced with the permission of the editor. Country Guide, incorporating the Nor'West Farmer and Farm & Home, is printed and published by The Public Press Ltd. Head Office: 1760 Ellice Ave., Winnipeg 21, Manitoba. Eastern Office: 150 Eglinton Ave. East, Toronto 12, Ontario.

Subscription rates in Canada—\$1.00 one year, \$1.50 two years, \$2.00 three years, \$3.00 five years. Outside Canada—\$1.50 per year. Single copies 25¢. Authorized as second class mail by the Post Office Department, Ottawa, and for payment of postage in cash. Postmasters return Forms 29B and 67B to 1760 Ellice Avenue, Winnipeg 21, Manitoba.

Serving Canadian Farmers Since 1882

HATCH MORE POWER!

(and save fuel)



Chances are that the tough winter has left power-strangling, fuel-eating deposits on your spark plugs. Here's what engineers recommend to regain 11.2% more horsepower and the 13.3% better gas economy which they found to be the loss in hundreds of tractors in recent tests.

In arriving at the figures of 11.2 per cent loss in horsepower and 13.3 per cent loss in gasoline economy, the engineers made the following tune-up operations:

1. Adjust carburetor
2. Set timing
3. Replace spark plugs
4. Service air cleaner
5. Adjust governor

In some cases, points and condenser were also replaced. Of these five operations, spark plug replacement pays the biggest returns when a tune-up is needed.

When To Tune-Up? Experts recommend a six month plug change. It can mean an increase of 6.7% more power—and can cut running costs by 8¢ in every gas dollar. It's just plain uneconomical to try to 'stretch' plug life.

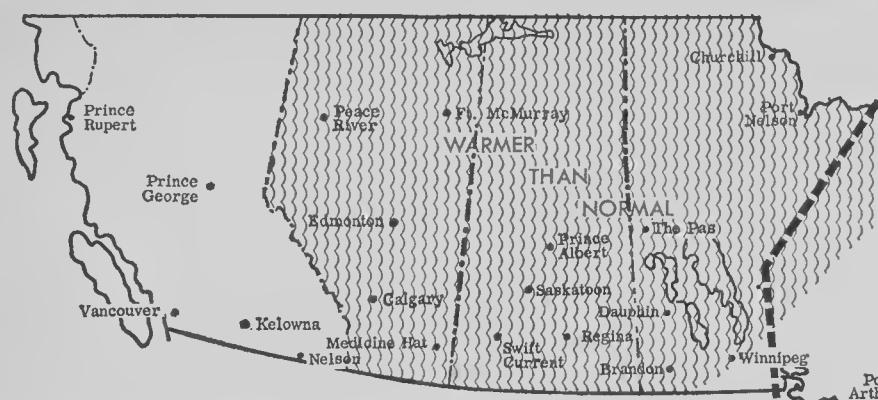
You don't need costly power and fuel wastage—you need new Champion Spark Plugs to hatch new power!



CHAMPION SPARK PLUG COMPANY OF CANADA, LIMITED
WINDSOR, ONTARIO

CHAMPIONS—FIRST CHOICE OF TRACTOR MANUFACTURERS

Prepared by IRVING P. KRICK ASSOCIATES



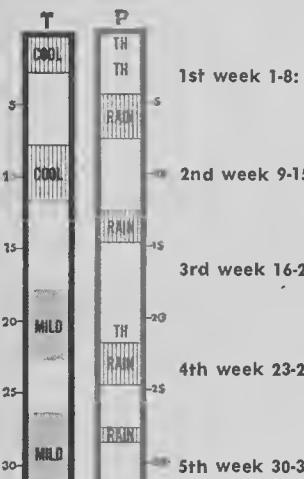
MAY HIGHLIGHTS: Frequent cool weather is forecast for Prairie Provinces during first third of month, warmer after mid-month. Temperatures will average above normal while most of prairies will receive above normal rainfall, near to below normal in Alberta. Cooler and wetter than normal for May from southern Ontario through Atlantic Provinces.



MAY 1965

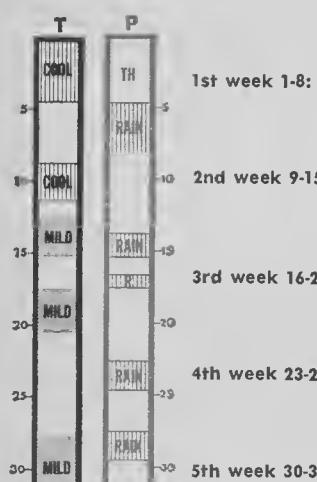
(Allow a day or two either way in using this forecast. It should be 75 per cent right for your area, but not necessarily for your farm.—Ed.)

Alberta



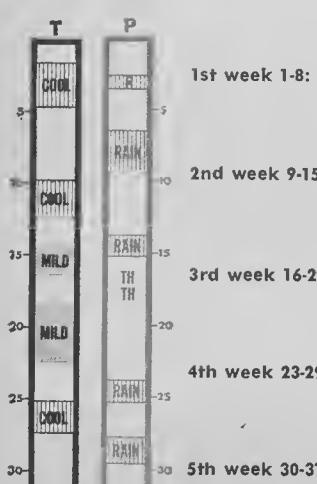
- 1st week 1-8: Cool at beginning and end of week, with highest temperatures likely between 5th-7th. Threat of showers around 1st, 3rd and again between 5th-7th.
- 2nd week 9-15: Continuing cool to 12th, then seasonable through 15th. General rains are forecast around the 13th, 14th as a storm moves through the region.
- 3rd week 16-22: Warming to readings in 70s and 80s after the 18th. Precipitation will be light and spotty during the week, becoming most threatening toward week end.
- 4th week 23-29: Scattered showers during first few days, and rainy again in south sections around 29th. Seasonable temperatures, rising above normal near the 27th.
- 5th week 30-31: Mild and dry.

Saskatchewan



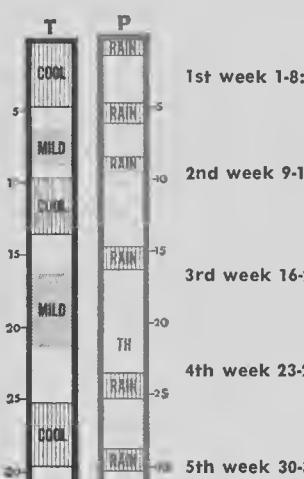
- 1st week 1-8: Cool, unsettled weather is forecast. Scattered showers threaten around the 3rd; and more general moisture is indicated from the 5th through the 8th.
- 2nd week 9-15: Cooler from the 9th through 11th, warming to mild by 13th. Sunny skies will predominate although widespread rain is expected by the 14th, 15th.
- 3rd week 16-22: General showers are expected around the 17th, but rest of week will be dry. Temperatures will be normal or above; warmest between 18th-20th.
- 4th week 23-29: Could be wet. Showers forecast around 23rd, 24th in south and generally on 28th, 29th. Most afternoons in 60s-70s; warmer at week end.
- 5th week 30-31: Dry and warm.

Manitoba



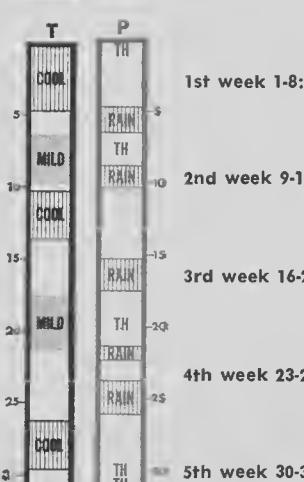
- 1st week 1-8: Scattered light showers around the 3rd; more general showers on week end. Temperatures below normal; lowest between 2nd-4th.
- 2nd week 9-15: Showery at beginning and end of week. Dry and cool with temperatures dropping into the 20s between 10th-12th. Some warming likely by week end.
- 3rd week 16-22: Temperatures above normal, highest during week end. Little precipitation—only a threat of scattered showers around 17th, 18th.
- 4th week 23-29: No extreme temperatures forecast, but chilly on mornings around 26th. Rains general near 24th and 25th and again at week end.
- 5th week 30-31: Skies clearing, weather dry, temperatures normal.

Ontario



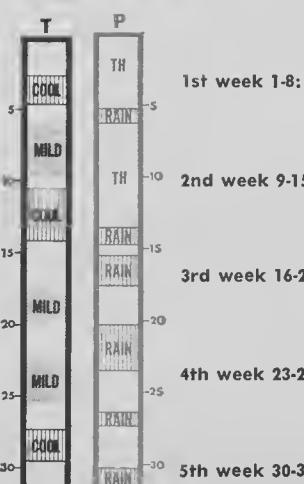
- 1st week 1-8: Cool at beginning of week, warming to above normal at week end. Some rain in south sections at beginning of week, more around 5th, 6th.
- 2nd week 9-15: Rain around the 9th, followed by cool weather between 10th-13th. Some additional shower activity is likely around the 15th.
- 3rd week 16-22: Showery on 16th, then generally dry. Threatening in southeast at week end. Mostly mild, with temperatures in 70s between 17th-21st.
- 4th week 23-29: Locally heavy showers and thunderstorms on 24th, 25th, followed by cool air. More rainy weather is forecast for week end.
- 5th week 30-31: Some rain on 30th, clearing on 31st.

Quebec



- 1st week 1-8: Cool between 1st-4th; highest daytime temperatures likely toward week end. Showers threaten in south at beginning of week. Showers on 5th, 6th, 8th.
- 2nd week 9-15: The mild weather will give way to general showers on the 9th, 10th. This will be followed by several days of rather cool, dry conditions.
- 3rd week 16-22: Unsettled. Showers widespread on first 2 days, threatening on 20th. Rains general by 22nd. Highest daytime temperatures (70s) between 18th-21st.
- 4th week 23-29: Wet weather between 24th-26th will be followed by cool air which will move slowly through the province, remaining cool through end of week.
- 5th week 30-31: Cloudy and threatening but little if any moisture.

Atlantic Provinces



- 1st week 1-8: Threat of spotty light moisture around 2nd followed by slightly cooler weather. Rain due around 6th. Warming at week end.
- 2nd week 9-15: Cooling between 11th-14th. Little chance of moisture during first half of week despite minor threat around 10th. Main storm expected around 14th.
- 3rd week 16-22: Widespread rain due near 16th, 17th. Slight warming likely on 18th, 19th. Important storminess will affect entire region during last 2 or 3 days.
- 4th week 23-29: Storms diminishing after 23rd, but further rain is forecast near 27th. Highest daytime readings due early in week, cooling during week end.
- 5th week 30-31: Showers, thunderstorms across provinces on 31st.

Key to Abbreviations: T, temperature; P, precipitation; CL, cooler; WM, warmer; TH, threatening; SH, showers; R-S, rain or snow.

Editorials

Strong Branch Line Authority Needed

SPOKESMEN FOR railways, farm organizations, truckers, provincial governments and elevator companies all presented their views on the subject of branch line abandonment and transport rationalization at the 2-day session of the Farm and Business Forum in Winnipeg in late March. By the time they were finished, any who doubted the need for the Federal Government to revise Bill C120, which is intended to deal with this subject and which is now being studied by a Committee of Parliament, must have felt lonely indeed.

Not only are farmers and farm groups dissatisfied with Bill C120 as it was first presented this winter — provincial politicians, university professors, independent economists and others agree with them.

During the 2 days of discussions not a voice was raised to dispute the need for branch line abandonment and transportation rationalization. But time after time, the point was driven home that this could not take the form of piece-meal abandonment, with the sole criteria on each line being whether or not it was losing money for a railroad. By the end of the session,

it was apparent that if Bill C120 is to meet the demands of Western Canada, it must be revised to provide for a Branch Line Rationalization Authority with much broader powers and terms of reference.

Reference was made to the report of the MacPherson Royal Commission itself, which clearly spelled out the principle that must apply to branch line abandonment: "There are several parties to the problem of rationalization and these include, besides the railways, communities along the lines, elevator companies (producer-controlled and private), the Wheat Board, provincial authorities responsible for roads, farmers and possibly truckers."

Economist Ralph Hedlin, of Hedlin-Menzies Associates, Winnipeg, whose firm has made several studies of the implications of branch line abandonment, suggested: "The railways have their role to play in adjustment. But to suggest or imply that the railways should be adjusted and rationalized without in some measure co-ordinating their moves with the overall social and economic needs of the rural

communities would appear to be, at a minimum, unwise."

Making the same point, Saskatchewan Wheat Pool President Charles Gibbons said that it is essential to have a competent authority to consider the problem on a broad area basis, if there is to be a logical and satisfactory solution to the current railway problems.

C. T. Hazen of the Canadian Chamber of Commerce left no doubt that he saw need for an authority much more comprehensive than that envisaged by Bill C120.

Dr. J. C. Gilson of the University of Manitoba suggested, "The railways must be permitted to operate on a sound economic basis. At the same time, however, nothing must be done which will unduly prejudice the competitive position of Western Canadian farmers on the international markets of the future."

When a railway spokesman agreed with this philosophy, as W. C. Bowra, vice-president, Prairie Region, CNR did, it became evident that the fight for a rationalization authority with broader powers was over, and it was going to be a question of the government simply providing one to meet the needs.

As Bowra explained: ". . . the objective of all interested parties should be a program that is good for the nation as a whole . . . and not simply a program that serves each party's short-range objectives. The best method of attack appears to be a co-ordinated program on which all the parties are prepared to compromise to reach an agreement." V

A Sane Approach to Pesticide Residues

IN OCTOBER 1963 a Washington State dairyman named Al Sandvig had his milk barred from the market when State inspectors found it contained up to 17 parts per million of DDT. Sandvig, who had been milking about 100 top quality cows, was considered one of the Yakima Valley's best dairymen. Only the previous year, the Sandvigs were voted "Yakima County Dairy Family of the Year."

Going over the Sandvig place carefully, the inspectors could find no trace of DDT in hay, silage, grain, water, salt, or even in the soil. Then they happened to see an open pit silo which contained a few remnants of corn silage bought from a neighbor. It had been fed as a stop-gap measure for only 11 days during late August and early September. This proved to be the most costly feed the Sandvigs ever purchased. It tested at over 35 parts per million of DDT, even after 6 weeks of exposure!

This could happen to any dairy farmer in Canada, and through no real fault of his own. Before buying the corn, Sandvig asked his neighbor on three separate occasions if the crop had been sprayed with DDT. "No," said the man, "only with Sevin," and Sandvig took his word for it. Washington State agriculture officials investigated, however, and found a paid invoice from an aerial spray company which showed that DDT had been used. Although this proved that Sandvig was blameless, it did not bring back his dairy business. Clearly, a buyer of feed needs something a bit more tangible than a seller's word that the feed is safe.

But one of the most startling things about this case is that, while officials ruled this milk unfit to be sold to the public, they declared it quite safe for the Sandvig family to drink. If it is safe for anyone to drink milk containing this level of DDT, why keep legislation on our books which might see a farmer put out of business (and a valuable herd destroyed) for having milk with a one part per million reading? Modern techniques make it possible to discover even the most minute traces of pesticide residue. Surely it is time we reconsidered

our present policy of demanding an absolute zero tolerance in milk.

The Sandvig story, and the more recent cases in Grand Forks, B.C. (reported in this issue) raise another question. Should we not have some form of compensation to enable a farmer to go on feeding and milking his herd until pesticide levels have receded, instead of forcing him to get rid of valuable cattle? Following the Sandvig affair, several bills were introduced in the U.S. House of Representatives calling for indemnity payments to dairy farmers whose milk has been barred because of chemical residues.

Here in Canada, there is not much point in paying large sums to expand our arable land under ARDA if we are going to knock out established producers on a technicality, and then deny them help to stage a comeback. The action of our Federal Government in buying the cattle at Grand Forks was a step in the right direction. By experimenting with the affected animals we may be able to learn what really constitutes a dangerous pesticide level. It also provides an opportunity for researchers to work on a "crash diet" which will reduce the level of residue stored in the animal tissues. The more we learn, the closer we will be to a sane approach to this problem. V

Milk Pool for Ontario?

ONTARIO'S DAIRY industry is once more face to face with a proposed solution for its long-standing problems of inequity, fragmentation, jealousy and uncertainty.

The solution, as reported in this issue of Country Guide, comes in the recommendations of the Ontario Milk Industry Inquiry Committee. This is the latest of several exhaustive reports that have been made of Ontario's dairy industry in recent years. The earlier reports have been casually considered and then ignored.

The newest plan is a bold, incisive and simple one. Accepted and implemented, it could provide a base from which dairy farmers and the dairy industry itself could plan a rapid and long overdue move forward. It could bring equality of opportunity to dairy farmers, and bring a halt to the intrigues and

feuds and clashes that persistently rack the industry, pitting farmer against farmer and dissipating the strength of all who are involved.

The recommended solution is to form a milk pool in southern Ontario. Present producer groups would give way to a single organization called the Milk Producers' Pool. The Pool would be controlled by producers and have authority to sell all fluid milk and responsibility to buy all top-quality milk offered to it. Every dairy farmer would have free entry to this Pool provided he produced milk of sufficiently high quality. Present quotas of fluid milk producers would be eliminated. They would be purchased by the government so that milk producers themselves would not pay the price of their loss. Managing the Pool would be the most competent man available.

Supervising the province's entire milk industry and developing long-term goals and policies for it would be a Milk Commission which would replace the present Milk Industry Board, and would consist of a chairman and two commissioners appointed by the Lieutenant-Governor-in-Council. Each would be competent administrators.

The recommendations in the report go on at a rapid pace. One calls for a sweeping away of protective arrangements including marketing and distribution areas, formula pricing and detailed transport licensing. Another calls for simplification and clarification of the role of government as the industry displays capacity for greater independence. Finally, there is a call for flexibility in the attitude of the industry, its manner of organization, and its pricing policies, to encourage the adoption of new ideas and facilities.

While the recommendations may sound revolutionary to many dairy farmers, the principles involved are not new. The milk pool idea has been adopted and generally accepted in British Columbia. It's the same general principle as is used by prairie farmers in their Wheat Board. It is a program that has been worked out by trial and error by dairy farmers in other countries. As the Ontario Inquiry Committee's report states: "The Federal Orders in Ohio and elsewhere are eloquent evidence of what could be here soon. We should use the 30 years of experience achieved in these places. . . ." V

GUIDE POSTS



OILSEED CROPS have caught the fancy of many producers this year. Planting intentions indicate rapeseed acreage will double, with lesser increases for flax and soybeans.

FEED GRAIN ACREAGE will register an increase this spring and barley make a good comeback. Despite this, supplies will likely be relatively small this fall unless growing conditions are exceptionally good.

HIGH SCHOOL STUDENTS are approaching examinations and now is the time for a hard look at the future. It's deflating to realize many machines now have the built-in equivalent of about a high school education, so try to keep at least a jump ahead.

TURKEY RAISERS will need sharp management to avoid slim profits this season. Size of early poult placement indicates a large output again.

DURUM SEEDINGS may be cut in half this spring. This should take some of the pressure off the prices caused by large surpluses. However, there is little danger of supplies running short.

POTATO ACREAGE INCREASE is expected to be moderate, considering the high prices this year. You could spoil your chances for reasonable returns this fall by putting in those few extra acres this spring.

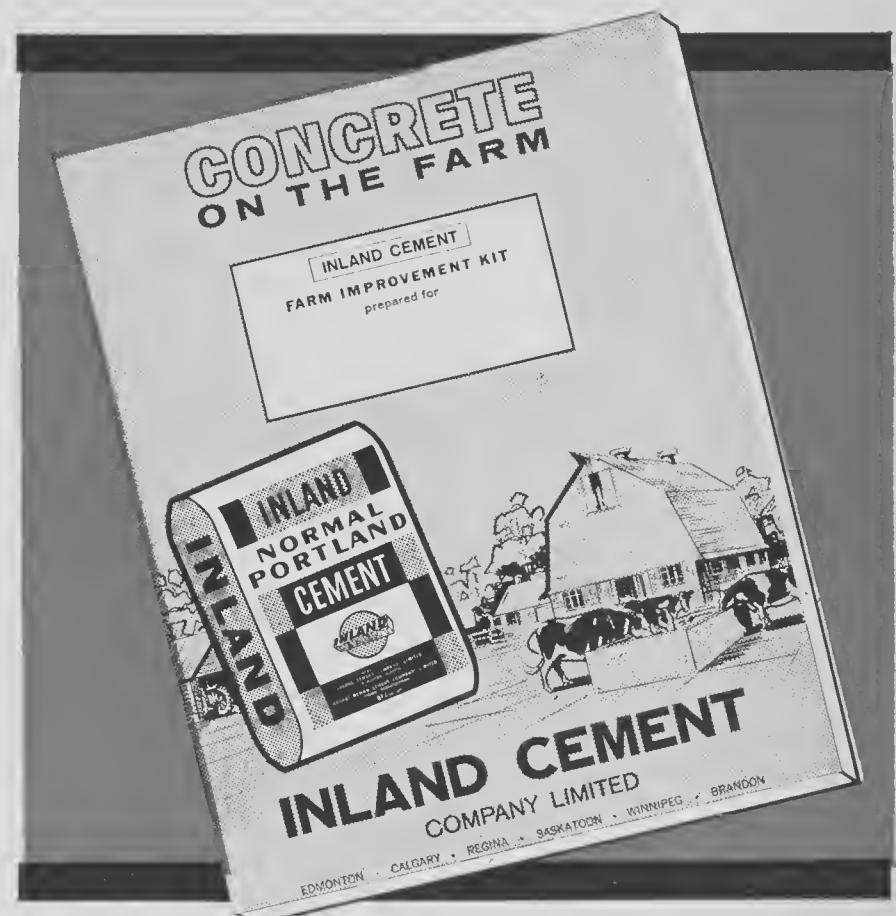
FERTILIZER USE will likely spurt ahead again this season. The economy of extending output within the fence line, rather than stretching the overall area, is readily apparent.

1965 BEEF OUTPUT will be large--some 10 to 15 per cent above 1964. This will force extra exports to the United States, where prices are expected to be steady and should maintain our prices at about 1964 levels.

PACE OF WHEAT MOVEMENT continues to be brisk so most of the 1964 crop should be off the farms before the new one comes on. While exports won't match those of last year, this could be the second best.

CANADIAN FARMERS' cash income (not net income) from farming operations in 1964 reached the all-time high of \$3,455.8 million according to the DBS. This is 8.5 per cent above the previous record set in 1963.

FREE! THE NEW INLAND CEMENT FARM IMPROVEMENT KIT



■ FEEDLOTS ■ BARNs ■ POULTRY HOUSES ■ DAIRY SHEDS ■ HOG SHELTERS

More and more, Western Canadian farmers are turning to concrete to provide the labor-saving, cost-cutting farm improvements that mean bigger yields and greater profits. Farm improvement information is covered in detail in the Free Inland Cement Farm Improvement Kit. The Kit contains construction details of practical, enduring, low-cost farm structures and renovations that mean greater profits. For your kit, fill out the coupon below.

MAIL THIS COUPON TODAY!

FREE FARM IMPROVEMENT KIT

Inland Cement Company Ltd. or Saskatchewan Cement Company Ltd.
(A Division of Inland Cement Co. Ltd.)
P.O. Box 2555, Edmonton, Alberta
P.O. Box 767, Regina, Saskatchewan

Please send me at no cost or obligation detailed information booklets on practical uses of concrete on the farm.

Concrete for Feedlots Concrete for Dairy Farms
 Concrete for Hog Raising Concrete for General Farm Construction

Name.....

Address.....

Province.....

INLAND CEMENT COMPANY LIMITED
EDMONTON • CALGARY • REGINA • SASKATOON • WINNIPEG • BRANDON

Go ahead! TEST DRIVE HD-5

DISCOVER THE POWERFULL DIFFERENCE



Your Canadian Propane dealer invites you to test drive HD-5 - the heavy-duty gas specially refined to cut your fuel costs and deliver extra fuel-power. Costs far less than other tractor fuels - yet what a difference at the drawbar! Canadian Propane HD-5 sets a new standard in power economy. It means extra pulling power - more work accomplished every day - *more power and profit from every fuel dollar!*

FULL TRACTOR SERVICE SUPPORT

ensured in your area, through the co-operation of the manufacturer of your propane-engineered tractor. All service carried out by mechanics factory-trained in the quality care of propane-powered machines.

DOLLAR-SAVING RENTAL PLANS for your filling equipment

Your Canadian Propane dealer has a plan to meet your individual requirements. Fuel Transfer Pumps . . . Mobile Storage Tank to transport all the gas you need where you need it . . . or Bulk Storage Tank from which to draw Canadian Propane HD-5 for your tractor and your home. All available in low-cost package plans tailored to your needs.

SO . . . TEST DRIVE CANADIAN PROPANE HD-5!

Prove to yourself the *profitable* power in Canadian Propane HD-5! Ask your Canadian Propane dealer about the *difference in your area* in gas and operating costs over any other fuel. Ask for a free demonstration of Canadian Propane HD-5 in action - with you at the tractor controls.

Canadian Propane

fuelpower!

IN THIS HEAVY-DUTY,

HIGH OCTANE TRACTOR FUEL.



8-POINT PROFIT CHECK WITH CANADIAN PROPANE HD-5

1 HIGH COMPRESSION POWER Greater piston and crankshaft efficiency, with a powerful difference at the drawbar.

2 COOL POWER The cool, heavy-duty mixture means more weight per cylinder load - delivers more power.

3 EFFICIENT POWER Because it is all vapor when it enters the cylinders, Canadian Propane HD-5 burns completely. No power loss!

4 CLEAN POWER Smoke-free in operation! The exhaust products are clean with Canadian Propane HD-5.

5 LOWEST OPERATING COST Low cost-per-gallon - higher H.P. output - fewer oil and filter changes.

6 LESS MAINTENANCE Manufacturers report less "time out" for major repairs, replacements and overhauls with propane-powered tractors.

7 SAVE PARTS COSTS No abrasive carbon to wear piston rings, cylinder walls.

8 LONGER ENGINE LIFE Naturally - with clean combustion and reduced oil contamination!

Check with your dealer for details, and for literature on Canadian Propane HD-5 and tractor carburetion.

ALSO - CANADIAN PROPANE HD-5 FIELD DAYS NOW BEING HELD

HD-5
fuelpower!

Canadian Propane

SPECIALISTS IN PROFITABLE FUELPOWER

A Limit to Farm Size

This big farmer says economy of production, particularly with livestock, comes from the skill of the individual operator

ONE OF Britain's biggest and most progressive farmers predicts that farms won't get much bigger than those being operated as sound economic units today. Rex Paterson, who is well-known in Canada because of speaking engagements here in which he discussed forage-growing and harvesting systems which he devised himself (the Paterson buckrake has been used on many Canadian farms) was speaking at the British National Power Farming Conference recently. He said there will be little change in the future from the present size of farms where men can work individually, or as small teams.

"Grain growing," he said, "like rearing broilers and keeping hens, will undoubtedly develop in many cases as specialized operations. Pigs may or may not develop in the same way. The question in everyone's mind is whether beef and milk will be produced in larger units which are also divorced from the land on which the feed was grown."

"In hot, dry countries where feed in the form of grain can be grown more cheaply than grass, there may be advantages in handling both beef

and milking cows in feedlots. In these cases feed can be prepared and moved to the stock mechanically, and large units may help to reduce the unit cost of operation.

"In most parts of this country, however, it is hard to see any justification for similar developments because grass is likely to remain the cheapest feed as long as the animal is left free to feed herself from either the field or the stack. There is no obvious advantage in adding to the cost of this feed by additional transport, expensive storage, and mechanical movement of the feed to the stock.

"Apart from the mechanical problems there are still many technical problems involved in stock feeding which have not been adequately studied. While increasing evidence is showing the advantages of an adequate high energy diet for fattening animals, the problems which arise in feeding and handling milking cows are likely to be very different. For instance, it has always been assumed that if early cut grass can be conserved in a more palatable form by wilting or drying it, the yield of milk would be increased.

In fact, this may lead only to higher consumption, and a greater live-weight increase requiring higher maintenance, but yielding no more milk. Increased digestibility from earlier cutting may also lead to a reduced fat content in the milk.

"In contrast, a slightly lower digestibility with more fiber can lead to reduced consumption at lower cost, with a moderate reduction in yield followed by an increase in yield later in the lactation when the cow goes to grass. Similarly, young stock reared on a lower plane of nutrition will generally do better in later life as milking cows. Before we can be sure that many current recommendations in regard to the mechanical storage and handling of grass crops are justified, we must know more about these unexpected complications.

"As reported earlier, we have found that men work better as individuals, or in the smallest possible teams. In any case as the output per man increases the farms which employ more than two units of labor will be reduced. This means that methods of production which require a team of several men may be ruled out. On the majority of areas devoted to livestock, it is likely that milking herds will not exceed 60 to 100 cows, and other units of livestock will not be more than one man can comfortably handle. Hilly and soft ground will not favor the development of unduly large units of land, or the use of much larger equipment. In fact, I find it difficult to see the possibility of changes much beyond

what many people are already doing. This may be because I am getting older and more conservative in my outlook, but it is certainly not for lack of study of the problem.

"For the last 30 years I have farmed a large area of land where it would have been possible to create any size of unit likely to give the most economical production. Nevertheless, attention has been devoted to seeking the smallest possible viable unit, and not the largest, because of a strong conviction that economy of production, particularly in handling livestock, comes from the skill and interest of the individual employee. Agriculture is one of the last remaining opportunities for individual employment, and there will always be men who seek that type of employment. Experience indicates that the good livestock man will take the responsibility for care of his stock on 7 days a week, so long as he has adequate time to himself for part of the day, and a break for a complete holiday at some time in the year. Working on the basis of moderate-sized units of livestock not only satisfies the individual employed but reduces transport costs and lost time in moving stock.

"Farm mechanization in the future, therefore, depends on studies of human requirements, as well as all the technicalities of conservation of feed for livestock, and its supplementation from outside sources. In particular, it depends on the competition between grass and grain as a livestock feed." — Norman Goodland.

THE BIGGEST HOME VALUE IN WESTERN CANADA NELSON HOMES '65



The LYNNWOOD Package Price \$6,675.00

All carports, garages, etc., are optional extras not included in the price

A Nelson Home gives you the best dollar-for-dollar value in Western Canada. It costs less to own because the Nelson system of factory manufacturing is the most advanced in the home-building industry. Nelson engineers have designed and developed specialized construction equipment that greatly reduce labor costs and completely eliminate material waste. These savings are passed on to the home buyer.

Yet Nelson never sacrifices quality. Only the highest grade materials go into a Nelson Home. Purchasers seek out the best from around the world and then buy at volume prices . . . a saving to you that no contractor or individual can offer.

Nelson Homes are designed for convenient, comfortable family

24 QUALITY PLUS DESIGNS



NELSON
MANUFACTURED HOMES

Edmonton, Calgary, Regina, Saskatoon, Lloydminster, Swift Current, Grande Prairie and Virden

living. Rooms are large and spacious. Kitchens are planned to give the homemaker practical convenience in pleasant surroundings. Plenty of linen and clothes closet space is provided. Everything you've ever wanted in a home is part of each Nelson Plan.

Nelson Homes are delivered, ready for erection. You can do it yourself and have your home under roof in a few days.

Investigate! Find out why so many happy Western Canadian families wouldn't live in anything but a Nelson Home. Send today for your free copy of the beautiful, full-color 1965 Nelson Home Brochure.

MAIL THIS COUPON TODAY

Nelson Manufactured Homes, Department C, P.O. Box 920, Lloydminster, Alberta

PLEASE RUSH MY COPY of the exciting 1965 Nelson Homes Brochure, at no cost or obligation to me.

NAME.....

ADDRESS.....

OCCUPATION.....

TELEPHONE NO.....

CG-4

News Highlights

Present price support levels are unrealistically low, the National Farmers Union stated in a brief to cabinet ministers in Ottawa. It argued that forward planning of agricultural development is essential. It called for parity support prices on basic volumes of product, and recommended that price supports be limited to farm units dependent upon farm production and that deficiency payments be made on a regional and quarterly basis. It also suggested major revisions in grain marketing.

Although the price of farm produce must remain important to Canada's farmers, Vice-President George McLaughlin of the Dairy Farmers of Canada says farm price supports must play a leading role as well. He states that deficiency payments, market price supports, consumer subsidies, export subsidies, and other forms of support must become more important in the future. He called on government to institute a capital grants program to help farmers pay for land, building and equipment. He says help will be needed to attract and hold adequate labor too, while specialized training for farm labor, workmen's compensation and unemployment insurance at rates consistent with farm prices are needed.

The bankruptcy of M. M. Veregin Stockyards Limited, which operated 10 livestock buying yards in Alberta, has left 823 livestock producers owed \$237,537. As a result, the Alberta government has adopted new regulations requiring a \$10,000 bond on each buying station in the province.

The Ontario wheat producers' marketing board has sold the last of its wheat, nearly 900,000 bushels in a cash sale for \$1½ million.

Canadian farmers intend to cut back on wheat acreage this year. According to a DBS survey, they intend to plant 28.3 million acres to all classes of wheat, a 5 per cent drop from last year. Acreage seeded to rapeseed is expected to double from last year to a record 1,385,000 acres.

Members of 4-H clubs in the three prairie provinces will soon be distributing the slow moving vehicle emblem. It will be their spring and summer safety project. They will approach farmers, construction companies, municipalities and all groups and individuals who operate slow moving vehicles.

Charolais cattle are to be established as a breed in Britain. The country's minister of agriculture says that he is satisfied that Charolais bulls can be useful in crossbreeding and should be available to producers of beef. Controlled importation from France will be permitted.

Dairy farmers who want to test their cattle under the federal Record of Performance Plan won't have to

wait so long. Additional inspectors are being hired for ROP work.

New president of the Ayrshire Breeders Association of Canada is Don A. McIntyre of Finch, Ont.

Feedlot operators who used silage predominantly for their feeding operations had the lowest costs per lb. of gain, according to a survey conducted last summer in southwest-

ern Ontario by Prof. P. A. Wright of OAC. Total cost per lb. of gain including feed and overhead, in silage feedlots totaled 15.2 cents compared to 27.5 cents in feedlots where ground ear corn was the primary feed.

A British research worker says overemphasis on breeding pigs solely for their lean meat content can lead to tougher pork.

Chile is considering the purchase of some 800 to 1,000 head of Canadian Herefords.

A \$5,000 John E. Brownlee research grant has been made by

United Grain Growers to the Animal Science Department, University of Saskatchewan, for research on rapeseed meal.

Two Canadian scientists are being sent to Japan by the federal Department of Trade and Commerce to acquaint that country with the value of rapeseed meal in livestock and poultry rations. Japan is the largest importer of Canadian rapeseed but that country uses the meal for fertilizer. Recent research done by Dr. D. Cladlin of the University of Alberta and Dr. M. Bell of the University of Saskatchewan, who will be

(Please turn to page 83)

YOUR STUBBLE CAN MATCH YOUR FALLOW YIELDS

Your stubble can match your fallow yields with a Northwest Brand Fertilizer plan. If you didn't broadcast Northwest Nitro Cubes before you worked your stubble last fall we recommend you apply them before discing this spring. Then, drill in Northwest Brand 11-48-0 with your seed.

You should soil test to determine your total fertilizer needs. If you don't have time to soil test this spring see your local Northwest Brand Fertilizer Dealer for his recommendations. He knows your soils and he has the fertilizers to help make 1965 your year for more profit.

Exclusive Distributors in the Prairie Provinces:

The Alberta Pacific Grain Company (1943) Limited
Federal Grain Limited
Pioneer Grain Company Ltd.
National Grain Company Ltd.
United Grain Growers Ltd.

NORTHWEST NITRO-CHEMICALS LTD.
MEDICINE HAT, ALBERTA
"Setting the Pace for Growing Demand"

NW
NORTHWEST
FERTILIZER

Make hay...



One-man haying is a money-saving reality with the accurate Cockshutt 15 Bale Thrower handling the 60 lb. bales.

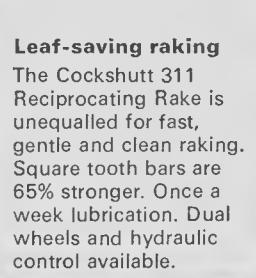
faster...better

Cockshutt haying equipment is capacity-matched to handle the heaviest crops

The leader of the Cockshutt hay-making team is the rugged high-capacity 620 Baler. This big, heavy-duty machine handles the heaviest flow of any hay crop with ease—up to twelve tons per hour. Patented Roto-Flo feed action with only tines touching the crop is fast yet gentle . . . no auger to grind or powder leaves. With the extra wide 56" pick-up and close-coupled design, you can handle the heaviest, widest windrows at a single pass. By attaching the Model 15 Bale Thrower, you become a "one-man crew", handling bales up to 31" and weighing up to 60 lbs.



High-speed mowing
Whether you choose a 3-point hitched 356, counterbalanced 351, or the trail type 415 Mower, you will find Cockshutt mowers unsurpassed for fast operation, clean cutting and dependability.



Leaf-saving raking
The Cockshutt 311 Reciprocating Rake is unequalled for fast, gentle and clean raking. Square tooth bars are 65% stronger. Once a week lubrication. Dual wheels and hydraulic control available.



Faster curing
Hay dries faster, can be baled sooner when its Cockshutt conditioned. Big new "slatted-rib" design crimps, stems every inch. Will handle an 8' mower swath with ease.

Three jobs at once
The 502 SP Swather cuts, conditions and windrows in a single pass. Will also windrow grain or can be converted to a field sprayer with 57 foot coverage.



For the latest in capacity-matched haying equipment visit your Cockshutt dealer today



COCKSHUTT

Farm Equipment of Canada Limited, Brantford, Ontario.

BRAMPTON, WINNIPEG, REGINA, CALGARY, EDMONTON.





PETER DE HAAN: Peter had his feedlot shut down and all hogs and beef cattle removed



RICKY DEVRIES: Inspectors from the Food and Drug directorate closed him down



LEN HOODLE: He'd built a dairy enterprise. Now he must find some new endeavor

The Buck Stopped Here

Dairy, beef and poultry farmers, butchers and other business people too—in fact, the whole community of Grand Forks, B.C.—are paying the bitter price of careless use of pesticides

by CLIFF FAULKNER
Field Editor

IT IS TIME that all of us who use pesticides stopped passing the buck on responsibility, whether we be farmers or city dwellers. Every time we take up a sprayer we have an obligation to use it with intelligence. If things go wrong we can't blame the manufacturer, anymore than we can blame a gunmaker if the rifle in our hands goes off and kills someone. It's no good saying the maker should have done this, or the government should have done that. The buck has got to stop somewhere. In the case of guns and pesticides the responsibility for safe use belongs primarily with the user.

This is particularly true for the farmer or stockman because he produces food for human consumption. But it is equally true for those who sell feed for animals, whether it is grain, hay, silage, or industrial by-products such as beet pulp, apple pumice and cull potatoes. A dairyman, poultryman or stockgrower can be put out of business through no fault of his own when he buys feed containing pesticide residues. In some places it is illegal to sell contaminated feeds to dairymen.

Last February the buck stopped at two dairy farms and a feedlot at Grand Forks, B.C. It did more than stop—it landed with a thud. Tremors were felt as far west as Victoria, and as far east as Ottawa. But the real damage was done in the neighboring towns and valleys which form the main markets for Grand Forks agricultural products. It was caused by that deadly handmaiden of all pesticide cases—publicity. It was the “cranberry scare” of 1959 and 1960 all over again.

A local egg producer, Len McKinney, with 10,000 layers and a thriving egg delivery business in nearby industrial towns such as Trail and Castlegar, found old customers refusing to use or handle his products. His business fell off 50 per cent in 3 weeks. This despite the fact that McKinney does not feed cull potatoes (named as the culprit in this case), and replaces his layers every 11 to 12 months so that no pesticide build-up in the bodies of his birds is possible. But a new batch of birds on order has been cancelled because he feels the scare has made it useless to try to maintain normal production.

of meat and dairy products were afraid to touch any of it. Farther west, in Osoyoos, a commercial traveler was told he had better do all his eating there because the food in Grand Forks was poisoned. A test of individual dairy herds at any of the centers on his route—including the big city he came from—would probably turn up residue cases just as serious as those at Grand Forks. In fact, six of the condemned cows were bought at the Coast last October so had little chance to eat Grand Forks potatoes. The pesticide level in these new animals was just as high as in the others.

All of us have some DDT or other pesticide stored in our body fat, possibly more than that found in the milk of the two condemned dairy farms. Nobody can prove that the amounts allowed in certain foods are harmful to humans—although it has never been disproven either. An American Medical Association research report stated that people working on farms using DDT averaged 17 parts per million of the chemical in their bodies. In tests, volunteers have taken up to 35 milligrams of DDT for a year with no ill effects showing.

In the case of milk products, however, no trace of pesticide is permissible. Many authorities feel this is unfair because new testing techniques now make it possible to detect residue quantities as low as *five one-thousandths* of one part per million in a producer's milk sample—a quantity so minute it is not worth considering. Yet this minute trace in your milk could put you right out of business if the tester applied the full letter of the law. Present detection methods have made a zero tolerance rule practically unenforceable!

RESIDUES WERE RECEDED

The manner in which the Grand Forks producers were closed up has come in for a good deal of criticism. The pesticide residue situation in the valley had been known for 10 years. In fact, in the last year or so, levels were actually receding. Chlorinated hydrocarbons, which caused the problem, are on the way out as pesticides. They are being replaced by organic phosphates which break down more readily. Why then, say producers, did the Food and Drug people suddenly decide to act? And now that the deed is done, are they just going to leave us sitting in the ruins of our economy?

Said Len McKinney, “When they make a mess like this they should test the whole valley and either give us a clean bill of health or shut us down completely. I would be happy to have them inspect my place at any time. I know they won't find anything. The way it is now they've just left the situation hanging. It could take us a year or so to recover.”

As Country Guide sees it, there was nothing particularly wrong with the way inspectors of the Food and Drug directorate acted in this situation. They were only doing their duty. The reason the Grand Forks case received such wide

(Please turn to page 66)

Hoodle cattle being loaded for shipment to CDA stations. Pushing on cow is Dave Young, CDA Production Service, Ottawa, who was in charge of buying and shipping condemned animals



Guide photos

Hogmen Try Radiant Heating

In most heating systems, heated air is moved to the pigs. In this new gas-fired infrared system, which is beginning to catch on, infrared rays heat the pigs directly, and the air system is left free for ventilating purposes

SOME MEMBERS of the Western Hog Growers Association were a little incredulous when Leo Lacroix—a Red Deer distributor—told their 5th annual meeting that gas-fired infrared heating equipment could provide heat for their hog barns without condensation. The experience of most growers was that a fairly strong current of warm air must be circulated through a livestock building to keep condensation at a minimum.

But infrared heating does not involve circulating warm air. In fact, infrared rays do not heat the air at all. They merely heat the objects they are beamed on, and these objects then give off their heat to the surrounding air. If the objects in question happen to be moist, freely perspiring pigs, these growers could not see how you could escape heavy condensation.

"A lot of people confuse ventilation with air movement," Mr. Lacroix countered. "Ventilation simply means the efficient removal of carbon dioxide, animal ammonia odors, dust and moisture. In this country, with its extreme temperatures, it is pointless to talk of ventilation without also referring to controlled heat and a controlled pattern of air movement. Recirculating of foul air in a barn does more harm than good. There must be a continuous and smooth flow of fresh air above the animals. This air should absorb the moisture, odors and dust which rise from the warm floor and exhaust it from a ceiling outlet."

This is where infrared heating has the advantage over other systems, Mr. Lacroix explained. It heats the floor and the hogs first. In time, the floor and space below it becomes a huge "heat sump." If for some reason the building should be without heat for a few days—even in the most severe weather—the animals will not suffer from a lack of heat.

"Since hogs are built close to the floor it is logical to say that this is where the heat should be," he said. "We also believe a warm dry floor will help overcome the incidence of pneumonia, rheumatism and other animal health problems caused by cold, damp floors. A very interesting side effect from this type of heating is that the new litter dries off quickly."

"In designing barn ventilation an attempt must be made to reduce floor drafts as well as air turbulence in the area occupied by the animal," he continued. "With infrared heating the fresh air intake should be placed around the perimeter of the building and as high as possible from the floor. The roof exhauster, whether it be gravity or mechanical, should be at the highest point and preferably in the center of the building. This exhauster (outlet flue) should never extend into the building below the ceiling line. Both inlet and outlet vents *must* be in balance so that at no time is there a negative inside air pressure created. It is this negative air pressure which causes the unpleasant conditions found in some barns."

by CLIFF FAULKNER

Field Editor

WANT HIGHER CEILINGS

"In our opinion the present standard of construction, heating and ventilation recommended for hog barns is far behind the times," Mr. Lacroix concluded. "A well constructed and insulated barn with a good vapor barrier is essential, but why keep the ceiling so low and thus reduce the volume of the building? With infrared heating, the greater the air volume the more effective will be your control of humidity, odors and dust. With a minimum ceiling height of, say, 12 feet, you can design your ventilation system so that air movement in your barn will follow a fixed pattern. This cannot be accomplished with blower air heaters and circulating fans."

Oddly enough, when Country Guide contacted some hog producers who were actually using gas-fired infrared heaters, the only case where condensation appeared to be a problem was in a barn where the ceiling was over 12 feet. This was at the farm of Melvin Ballhorn, about 7 miles southeast of Wetaskiwin, Alta. The infrared system was installed last fall, just in time for one of the most severe winters on record. Although the system worked quite well when the outside temperature was in the zero to -10 degrees range, a good deal of condensation appeared when the weather got colder. However, Melvin feels this can be corrected.

The Ballhorn barn is a 104-foot by 50-foot arch-rib hog feeder unit with a maximum inside height of 20 feet. Both inside and outside walls are of plywood with fiberglass insulation and a sheet of polyethylene plastic in between. Artificial heat is supplied by 12 infrared units—one at each end of the building and the remainder suspended over the hog pens. These are thermostatically controlled.

"Sometimes we have a bit of trouble getting the heaters to come on," Melvin said. "With 400 hogs in there the air will stay at about 60°F. by animal heat alone, but we want the heaters on so we can get some warmth down on the floor."

The condensation appears around the vents and doors. The installers have suggested that Melvin cut holes in the end walls just above the two heaters, but first he thinks he will try putting in another fan to draw the moist air off.

BEST GAINS AT 70 DEGREES

There are good economic reasons for keeping feeder hogs comfortable. The Journal of Animal Science reports that 100-pound hogs gain best for the least amount of feed when kept at 70°F. Two-hundred-pound hogs make their most efficient gains at 60°F.

At Viking, Alta., Robert McVittie has been using gas-fired infrared heaters for about 14 months. He has a 56-foot by 32-foot barn with an 8-foot ceiling. Heat is supplied by 10 infrared units located along the walls. There are open air

Inside view of Robert McVittie's hog barn showing the heating units and vents along the wall

A gas-fired infrared unit in operation in Melvin Ballhorn's barn is suspended over hog pens

The whole area around this door in the Ballhorn barn is always wet from the condensation



Archie Taggart's barn has its own self-contained propane unit. He is shown (r.) with propane agent

vents above each burner and thermostatically controlled fans to move the moist, unclean air out. The building will contain 10 or 12 sows and up to 100 young pigs at a time. Robert feeds his pigs to about 40 pounds and sells them as started feeders.

Said McVittie, "I am well satisfied with this kind of heating for my pigs. This cold weather has proven it out. I find it most satisfactory to keep the temperature at around 65°, even if it is -40° outside."

Another infrared heater installation is in the SPF hog barn of Archie Taggart, just west of Morningside, Alta. This is a 70-foot by 34-foot double-sheathed plywood building with fiberglas and polyethylene sheet insulation in between. There is no ceiling. Inside height ranges from 8 feet at the walls to about 14½ feet at the apex of the roof. The roof is insulated with ½-inch rigid insulation and 2-mill polyethylene plastic.

The Taggart barn is partitioned into two sections—one for farrowing and weaning and the other as a feeding or holding area. When Country Guide called, the building contained a boar, 12 sows, 44 baby pigs and 31 young pigs (8 weeks old). The SPF foundation stock arrived from the Connaught Laboratories last November 6. As the barn is not fully completed, only 10 of a recommended 14 gas-fired infrared heaters have been installed along the walls. These were put in about October 15, almost 3 weeks before the pigs arrived.

STEADY HEAT

"These infrared units give a good steady heat with no draft," said Archie. "Before the pigs got here, the units kept the floor temperature at about 65°F. with a thermostat setting of 55°F. That's what I like best about this system—the heat on the floor. You can wash a pen-out and in 20 minutes it is dry at the front end."

Fresh air is drawn into the buildings through vents just under the eaves above each heater. Foul air is exhausted by an 18-inch fan located in a metal cupola in the center of the roof. There has been no trouble with condensation so far. When the number of animals in the building reaches its rated capacity of 190 hogs, Archie feels he can handle the additional animal heat by putting in extra vents.

Because the Taggart system is fired by its own separate propane unit, Archie can keep a close check on operation costs. His gas bill for a 32-day period (which included the record cold spell of last December) was \$60, or about \$1.88 per day. A warming trend in the weather, and an increase in the number of animals in the building, reduced his next month's costs to \$1.50 a day. On this basis, it is possible to estimate a fuel cost of about \$1 per day when the building is full of hogs. The whole system, including tank and lines was installed for less than \$2,000.

Whether gas-fired infrared heaters are the answer to your heating problems would depend on the type of buildings you have and the cost and availability of fuel.

V

Which crop thief is robbing you?

**Weed-clean fields
with Kil-Mor^(H430)
and increase your
profit per acre!**

Controlling a wide range of weeds, including 'hard-to-kill' varieties that have resisted 2,4-D, KIL-MOR has proven in continuous field tests in all 3 prairie provinces that it effectively kills off these soil-nutrient stealers in the early stages, promoting a clean, healthier, higher yielding crop. In Alberta field tests KIL-MOR treated plots yielded an increase of 7 bushels of wheat per acre over untreated land. Oat yields at 2 farm locations were increased an average of 19 bushels per acre. In Saskatchewan field tests, where heavy Wild Buckwheat infestation was a problem, KIL-MOR increased wheat yields by 10 clean bushels per acre. Buckwheat dockage was completely eliminated. The oats from the untreated check were black with Buckwheat seeds. The increased yields — and the cleanliness of the complete crop as a result of KIL-MOR weed control, proved its effectiveness and profitability. Let KIL-MOR demonstrate its weed destroying powers against: Wild Buckwheat, Lady's Thumb Smartweed, Green Smartweed, Tartary Buckwheat, Cow Cockle, Hedge Bindweed, Corn Spurry, Russian Thistle, Canada Thistle (top control), Yellow Mustard . . . and many more. Easy to use, KIL-MOR is applied with a regular crop sprayer at the 3 to 4 leaf stage of the crop — when weeds are young — following dosage rates on the label. For complete application details and farm test results, consult your Green Cross Dealer.

KIL-MOR is available in 1 gal. cans and 5 gal. pails.
Contains Banvel (D) T.M. Velsicol Chemical Corporation



PRODUCTS

*Trade Mark Reg'd.

Division of
THE SHERWIN-WILLIAMS CO. OF CANADA LTD. Woodstock, N.B. • Montreal • Toronto • Winnipeg • Calgary • Edmonton • Vancouver

EXCELLENT RESULTS IN WHEAT



Mike Samaroden, Morsleigh, Alta.

"Using the recommended 6 oz. dosage of Kil-Mor (12 fl. oz. of Kil-Mor) to kill off Canada Thistle and Wild Buckwheat in my Thatcher Wheat, I got excellent results and a good clean crop under normal growing conditions. I intend to use Kil-Mor again for my 1965 weed control program."



[Guide photos]

Holstein steers are gaining popularity in Eastern Canada

By-product Beef

The production of dairy beef is on the increase and now accounts for one-quarter of our beef output

THE TREND TO DAIRY beef is one of the most controversial developments currently affecting both dairy and beef producers.

For many dairy farmers, the sale of calves for beef represents a significant source of income. The World Conference on Animal Production, meeting in Rome last June, had a special symposium on dairy beef. Numerous feeding trials have been conducted on the value of feeding both dairy steers and dairy bulls. In them, Holstein bulls gained faster than Holstein steers, while Holstein steers outgained beef steers.

Cattlemen in New Zealand, the world's number one dairy exporter, are crossing the predominantly Jersey herds, by using Angus, Hereford and Charolais bulls.

Denmark, with no domestic beef breed, is evaluating sires, not only for their ability to transmit milking qualities, but also for rate of gain and carcass characteristics.

With so much attention being focused on

this trend, there is the danger that dairy beef may be oversold. Dr. Tom Burgess of the Ontario Agricultural College utters a word of caution: "In the long haul, we will need more milk production and this will mean that more male calves will be available for beef production; however, there has to be a price incentive to make the finishing of them attractive. At present, a 250-lb. veal calf at 35 cents per lb. will gross \$87.50, a 400-lb. feeder calf at 17 cents will gross \$68 while a finished dairy beef, weighing 1,200 lb. and selling at 18 cents will gross \$216. In Britain the dairy herd is the logical source for augmenting the supplies of domestic beef; in Canada, dairy beef is just a case of dollars and cents."

Production of dairy beef is not exclusively a sideline proposition for dairymen. A year ago, the Bolger Farm Limited feedlot at Ariss, Ont., which has a capacity for 500 steers, was mostly filled with short-keep Holstein steers. These were purchased at 900-1,000 lb. and finished at 1,200-1,300 lb. This winter, there were few Holsteins in the feedlot, although there will probably be more by late spring; short-keep Holsteins purchased at that time are often a more attractive proposition because the demand for that class of beef is better during July and August when they would be marketed.

Dairy beef for the most part complements, rather than competes with, supplies from standard beef breeds. One trend is to supermarket shopping and the food chains are emphasizing top brand beef; this works against dairy beef because only a small proportion of such carcasses will be branded red or blue. On the other hand, a second trend in beef preference is toward a demand for leanness. Dairy beef which doesn't meet the specifications for prime beef goes for fabricating and manufacturing and the demand for this beef is growing. The lowly hamburger has become almost a symbol of youth; with the younger generation it rates above steak. Dr. James Nichols of Pennsylvania State University told the National Breeders' Meetings at Kennebunkport, Maine, "youth appears to live on hamburger, wieners and pop!"

Other factors, in addition to the demand for

by PETER LEWINGTON

Field Editor

lean beef, have contributed to the interest in dairy beef.

The need of many farmers for more income is a key one. In Nova Scotia, Earl Jennings and Sons at Masstown, raise their dairy steers to market weight. Bob Albin and his sons John and Doug at Paris, Ont., not only raise all their steer calves but also buy 50 to 75 extra calves each year. "When the milk market is soggy, I turn to more steers," says Albin. He aims to finish an 1,100-1,200-lb. steer at 18 months. Some research data indicates that maximum gains are achieved up to 16 months of age, at which time the rate of gain begins to decline.

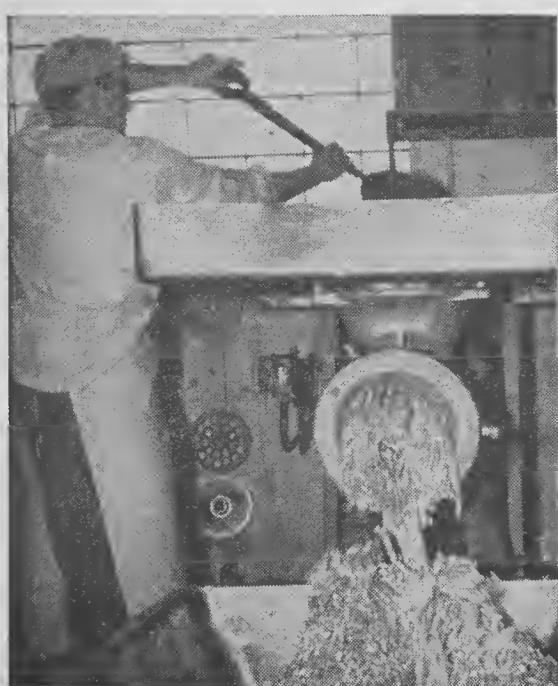
For many farmers, a dairy beef program has provided a good way to utilize bigger forage yields.

No motive is stronger than that of profit. Dairy beef is especially attractive when calves are cheap and the spread between top and standard brand beef is narrow. Variations in these conditions would explain widely differing profit margins, which in tests have ranged from \$4-\$69 per head. Dr. M. E. Seale of the University of Manitoba told the Manitoba Dairy Convention, "Dairy steers on a live basis which have had the same feedlot feeding will return about 3 cents per pound less than beef steers at marketing. If they can be purchased for 4 or more cents less as feeders, the probability is good that they will be more profitable. This applies under current price systems and assumes a choice grade of beef feeder and a common to medium grade of dairy feeder." Seale added that rate of gain is usually higher for dairy steers. He placed the margin at one-tenth to one-quarter pound per day.

However, these points on the credit side of the ledger must be weighed with a number of inherent disadvantages.

Ivan Stinson, who is a partner in Bolger Farms, has found that Holstein steers are not

(Please turn to page 55)



The younger generation has an apparently insatiable appetite for hamburger and wieners

**Dairyman Ed Kneller
finds that in cold weather**

Free Stalls Are Fine

by CLIFF FAULKNER

Field Editor

MANY DAIRY FARMERS with loose-housing barns have been looking for some way to keep their animals cleaner and cut down on bedding costs—two of the main drawbacks to loose housing. When Country Guide reported on the use of free stalls in open barns in Washington State (January 1962), and their spread to B.C.'s Lower Fraser Valley (October 1963), and Eastern Canada (September 1964), a good deal of interest was generated in this method.

Free stall housing uses the open barn and free movement principle of loose housing, but the solid manure pack that stays down all winter is replaced by a central concrete alleyway where the manure is cleaned out daily. Cows bed in individual open stalls; each chooses her own particular stall, generally the same one each night. The stalls have earthen floors and heavy straw bedding, which is kept in by a concrete curb. As the animals face inwards, and stalls are made about average cow length, just about all the droppings fall into the alley.

When a group of Alberta dairymen and extension specialists took a tour of Washington farms a couple of years ago one of the most discussed features was free stall housing. However, official opinion held that free stalls were impractical for the extreme conditions found in some regions of Canada because there is no manure pack to produce heat. Furthermore, the Univer-

sity of Wisconsin recommends a well-insulated and ventilated, closed-in barn for low temperature areas. This view was reiterated in an Alberta Department of Agriculture release early this year.

But there are always people who want to try a new idea, no matter what the experts say. Such a man is Edwin Kneller, who farms 600 acres just south of Wetaskiwin, Alta. With all due respect to the University of Wisconsin, Edwin built an unheated non-insulated barn, put in free stalls and brought his dairy herd through one of the most severe winters in Alberta's history in fine shape.

"There were a few cases of skin peeling on the teats during that worst blizzard in December (chill factor — 90° below)," he admitted. "But they got it when they went outside to feed. After that, I fed them inside for 3 weeks until we were able to finish work on a sheltered feeder."

When Kneller — who ships to the Carnation plant at Wetaskiwin — first heard about free stalls he talked the idea over with Carnation field man Jack Doan, and the local district agriculturist, Bill Proctor. Both these men were uncertain how free stalls would work in this country, but Proctor suggested that the type of ventilation would play an important role. Jack Doan checked with Wayne Jones at the big Carnation farm in Washington



Guide photos
Edwin Kneller shows the stall construction. Note the thick bedding and also concrete curb. Some bedding spills over

State, who thought free stalls would work in Alberta as well as anywhere, so Edwin decided to go ahead.

WOOD-FRAME BARN

The Kneller barn is a 32 ft. by 130 ft. wood-frame structure sheathed with plywood. Outside walls are stuccoed and the roof is covered with patent shingles. A certain amount of insulation is provided by two layers of paper between the stucco and the plywood walls. The concrete alley down the center of the building has a 1-foot slope for drainage, and there are sliding doors at each end to admit the tractor and scoop. There are stalls for 60 cows. Windows every 2 or 3 feet supply ample light.

The animals have free access to the outside feeding and exercise area through a sliding door on the south side of the building. This can be partly closed off on very cold days so that a minimum amount of animal body heat escapes.

Plans and specifications for the layout were supplied by Carnation. Pipe stalls were considered at first, but Edwin decided to make his stalls out of two-by-six lumber so the cows would have more privacy.

"If the sides are too open a timid cow might back out of her stall when she sees the other cows beside her," he explained.

Remembering what Bill Proctor said about ventilation, Edwin decided to let fresh air in through long slits on each side, just under the eaves. These have adjustable plywood covers which can be opened to a full width of 4 inches when the barn is full of cows. In addition to the slits, there are louvered openings at each gable end. Foul air escapes through five raised ventilators located at regular intervals along the roof. In warm weather, extra ventilation is obtained through slatted extensions to each end door.

CLEAN ALLEY DAILY

During the worst of the cold spell, Edwin's tractor broke down so that he wasn't able to scoop out the manure for a period of about 3 weeks. But he had no trouble moving it once the tractor was fixed. However, when the weather gets mild it's necessary to clean your alley every

(Please turn to page 55)

Yard showing sheltered feeder and corner of barn. Underground water pumping unit is shown in foreground

Plan a Winter's Feed

**These cattlemen take no chances
—they plan a "forage bank"
which has enough feed
to last all through the winter**

by ROGER FRY
Field Editor



Guide photos
The fine leaves on this hay were saved by well-timed handling

THE DEATH TOLL of 1,000 head of cattle in the range country of Alberta last winter can be blamed on a vicious storm. But feed shortages such as have occurred in some parts of Canada every winter during recent years cannot be blamed on single natural events, nor can their cost be measured in frozen cattle alone. Weak and dead calves born the following spring, or distress sales of poor cattle for lack of feed are other costs that must be considered.

Look at the record! Manitoba stockmen have been scrambling for feed all winter; B.C. cattlemen had to make special arrangements to get feed in when the Pacific Great Eastern Railway was halted by a midwinter strike; and in 1963-64, stockmen in the Peace River hauled hay from as far away as Brooks, Alta.

Canadian stockmen are only half way to the livestock population goal set for 1980. If they are to reach that goal they must have enough feed to last their herds through every winter — not just the easy ones. How can the individual producer protect himself against feed shortages?

Two farmers who had no feed troubles this winter were Clark Robson of Deleau, Man., and Wilfred Alvis of Boissevain, Man.

"We have no feed shortages because we *plan* to have enough feed," said Clark.

Clark Robson and his father, L. V. Robson, winter about 80 head of purebred cattle. They maintain 400 acres of cultivated forage to pro-

vide summer pasture and winter feed for their cows and calves and hay for the bulls that they raise. "We put up 170 tons or 2 tons per head for the winter; we sell about 80 tons; and we pasture the cows and calves," said Clark.

The Robson program to guard against feed shortages is two-pronged: a planned carryover and a willingness to use grain crops for hay. The Robsons store their chopped hay in two large self-feeding storage sheds and an overhead loft in the main barn. They arrange to leave a fresh 40-ton carryover each year, feeding out the previous carryover every winter. The storage sheds protect this carryover so that its quality is maintained.

The Robsons are determined that their hay storage will be filled each fall. "We would rather chop some grain crops to fill the sheds than go into the winter short of a full supply of feed," said Clark. "The few acres of grain that might be needed to make up the shortage would be cheap compared to buying hay when there is a general shortage."

FORAGE BANK

It's a program that falls right in line with that recommended by Dr. Marvin Seale of the Animal Science Department, University of Manitoba. Dr. Seale says each farmer must create his own "forage bank." He says they should gear the size of their cow herd to their average forage production, allowing a 25 to 30 per cent surplus in an average year. This margin could be 50 per cent when the

crop is good and the winter easy. At such times the temptation to feed the extra hay must be resisted.

"This carryover must receive adequate care in storage and should at least have a roof over it," says Dr. Seale. "In this way, only the vitamin A content will be lost and this can be easily replaced with supplements."

Wilfred Alvis has 150 head of beef cattle on his ranch in the Turtle Mountain area in southwestern Manitoba. He plans to have 350 tons of hay each winter, enough to allow a 50-ton reserve. This is a slim margin but he has not been out of hay for the last 5 years. He did have to cull heavily one fall to bring his cattle numbers in line with his feed supply.

QUALITY IMPORTANT

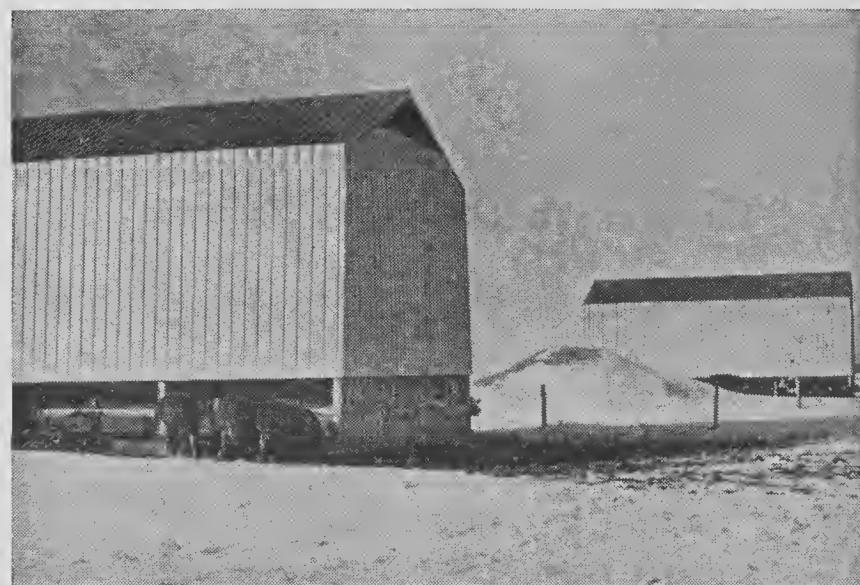
Wilfred calls high quality forage his best insurance against feed shortages. To get high quality, he starts haying early and moves the hay quickly from the standing crop to the stack.

To Wilfred, starting early means cutting hay by June 20 and finishing up before July 25. He believes that his hay reaches its peak quality by July 12 and he gets as much as possible off then.

To get the hay into storage quickly, Wilfred has developed an efficient combination of machinery. He uses a self-propelled swather and crimper, a tractor-mounted sweepstaker, a stack former and a stack mover. The crimper speeds hay drying so much that in June the forage which



The reward for planning the feed supply—it is March and Wilfred Alvis has more than enough stacks like this to last his cattle until turnout



With these two sheds and the barn loft full of chopped hay the Robsons know that they have enough feed to last their herd through the winter

is cut and crimped in one morning can be stacked during the afternoon of the next day. By July, Wilfred is cutting and crimping in the morning and stacking in the afternoon.

Wilfred has also developed a method of stacking that preserves the forage leaves. "I start stacking as soon as the hay on the knolls, where it is lighter, is dry enough to put into the center of the stack former. Then I pick up the heavier growth from the hollows, which takes longer to dry, and put it on the outside of the stack where it can continue to dry. In this way, I don't let my hay get so dry that the leaves are lost in the stacking," says Wilfred.

He prefers to work by himself so that he can do the various operations at the right time. If the weather is right and the hay is ready, he will continue stacking until dusk. "I don't knock down too much hay at one time, and I use the weather forecast to plan how much to cut."

How do you plan to have adequate forage? First consider your needs.

Al Watkins of the Soils and Crops Branch, Manitoba Department of Agriculture, suggests that the average requirement for all animals (cows, yearlings, and calves) is 18 lb. per head per day or 1½ tons per head for a 200-day feeding period. With a 30 per cent carryover and ¼ of a ton for waste, you need approximately 2½ tons per animal per year.

DOES HAY PAY?

The average production under Manitoba conditions is 1½ tons per acre so that it will take about 1½ acres of forage land to provide the winter feed for each head of stock. At this level of production, forage does not compete favorably with the returns from a 30-bushel per acre wheat crop unless it is valued at \$30 per ton. One hundred pounds of live weight gain will meet this cost, but the overhead of buildings and labor makes livestock a marginal operation.

If yields are 3 tons per acre, and the hay is valued at \$15 a ton, the hay will compete with the wheat crop and feeding this hay can be profitable. This means there is no choice but to aim for high yields. Watkins suggests several ways to get them: use fertilizer; take two cuts of hay per season; cut early for more nutrient value and higher palatability; and use the best varieties. He also points out that it is possible to seed alfalfa on summer-fallow without a cover crop. If it is properly fertilized, it will yield 1¾ tons per acre in the first year and a total yield of 5 tons in the second year.

If such improvement methods are not likely to increase your forage supply quickly enough, don't overlook the short term crops such as sweet clover that can give yields of 4 tons per acre, or oats which yield 3 tons per acre. These yields are obtained in the year of seeding and the land does not have to be committed to a long-term forage program to recover the initial costs of seeding.

STRETCH HAY SUPPLIES

One technique to make available winter feed go further is to extend the pasture season. By grazing the cattle on cover crops and fall rye, you can stretch out the pasture season both in the spring and in the fall. Volunteer grain and weed growth is often available on stubble fields and provides good pasture in the fall season. Rough native pasture can also be made more productive by such methods as brush control and fertilizing.

Dr. Seale points out that on good soils growing forage crops at the ex-

pense of higher income crops such as cereals or special seed crops cannot be justified. He suggests that cattlemen in these areas ought to make greater use of straw and feed grains in their winter feed rations.

S. M. Olson, livestock specialist with the Saskatchewan Department of Agriculture, has recently suggested several such rations. One of these is: 13 lb. of straw, 3.3 lb. of oats or barley, 1.7 lb. of 32 per cent protein supplement, mineral and vitamin A supplement. Light cattle should receive extra feed to build them up over the winter. A mature cow should weigh about

1,050 lb. before calving if she is to rebreed regularly and support a calf.

Feeding hay containing over 12 per cent protein is a wasteful practice as far as the protein content is concerned, according to Dr. S. E. Beaumont of the Canada Department of Agriculture Experimental Farm at Melfort, Sask. He suggests that high protein hay may be diluted with straw to 12 per cent protein for growing steers or to 10 per cent protein for wintering cows. Since early cut hay may contain as much as 18 to 25 per cent protein, such ration manipulations can extend the winter feed supply considerably. ✓

What does it really cost to own the World's Best Windrower?



There's a WORLD OF WORTH in a HESSTON

Multi-crop...Hesstonized Hay...Trim Steering...Trade-in Value

How do you figure the true value of a Hesston? Realistic first cost, low operating expense, minimum maintenance, multi-crop usage, highest trade-in value, convenience, speed, and ease of operation are a few factors to consider. Almost any windrower will handle grain, but not as fast nor as well as a Hesston. Its high-angle platform puts it in hay, grasses, seeds, and a wide variety of crops that others can't

touch. Hesstonized Hay has proven its extra worth in increased beef and dairy production. Hesston's Trim Steering lets you maintain precise control and make a full width cut every time with little more than wrist action. Canadian farmers who want to do more than just "get by" will consider the world of worth in a Hesston... industry leader for a decade!

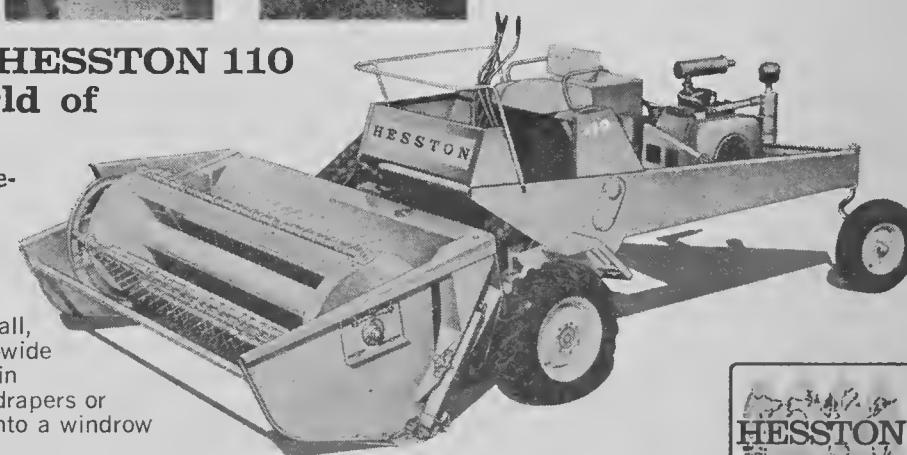
HESSTONIZED HAY WINS AT ROYAL WINTER FAIR. Norman and Donald Bagg of Woodbridge, Ontario, say, "When both our Edgelea Jersey's and our hay took first prizes at the Royal Winter Fair, we knew 'Hesstonizing' paid."



EASY HANDLING IN RUGGED CUTTING. A mower couldn't cut this 5-ton alfalfa-clover in Vernon, B. C., but Kathleen Collins cut it easily with her husband's 110. It now features one-hand Trim Steering.

New, compact HESSTON 110 opens new world of opportunities

Couldn't windrow before because of small fields, or the price of equipment? Now you can, with the new eight-foot, compact Hesston 110. It was designed especially for small, odd-shaped fields. Its 90"-wide hay conditioner is proven in heavy crops. There are no drapers or auger. You can form hay into a windrow or leave it in a swath.



Always count your last cost first and save from the beginning.

WRITE TO YOUR DISTRIBUTOR FOR DETAILS:

QUE-MAR EQUIPMENT LTD.,
124 Labrosse Ave.,
Pointe Claire, P.Q.

FALCON EQUIPMENT CO. LTD.,
299 Danforth Rd., Scarborough, Ont.
530 First St., London, Ont.

ALLIED FARM EQUIPMENT LTD.,
980 Pacific Ave.,
Winnipeg 2, Man.

GRAIN BELT FARM EQUIPMENT LTD.,
1920 1st Ave., Regina, Sask.
2025 Quebec Ave., Saskatoon, Sask.

NORTHWEST FARM EQUIPMENT LTD.,
Cor. 7th Ave. & 6th St. E., Calgary, Alta.
14820-123rd Ave., Edmonton, Alta.



HS-51A-365

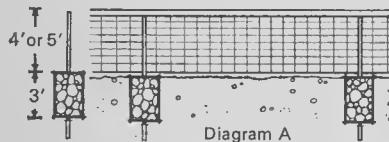
Products of HESSTON MFG. CO., INC.

702 King Street Hesston, Kansas, U.S.A.

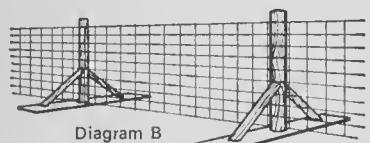
**Let's chat
with
John Blakely**

about setting fence posts in marshy and on rocky ground

I've visited very few farms that haven't got at least one spot where it's impossible to set a solid fence using the usual methods. I've seen some clever schemes for putting a fence across a marshy piece of land, or where shale rock is close to the surface.



One of the most practical ideas I've seen for fencing in swampy land makes use of old oil drums. As shown in diagram A the oil drum is filled with stone to support a T-Rail post. If stone is scarce at your place, concrete will do just as well. In fact, concrete will hold the post more solidly. Where the soil is very spongy, you can get extra stability by mounting a length of 2 inch pipe on the bottom of the drum to reach down to a solid base. Once you have the posts set up in this way, you attach the wire as usual.



In shallow or rocky soil where it isn't possible to set posts in the ground, I've seen above-ground posts used very effectively. Diagram B shows how these are simply built with a wooden post set on a sill and braced.

When it comes to choosing the wire, see your Stelco Fence Dealer. He has a complete line of Frost Brand farm and specialty fencing, barbed wire, posts, gates — whatever you may need in fencing material.



**THE STEEL COMPANY
OF CANADA, LIMITED**

6517/1

TRADE PERSPECTIVE: THREE

The Power to Destroy

Protection from plant and animal disease is essential to trade in agricultural products

by PETER LEWINGTON

Field Editor

REMEMBER THE FUSS when Mr. Diefenbaker was rumored to be returning from Ireland with a shamrock in his baggage? On the surface this could appear as a tempest in a teapot. The shamrock, however, is known to harbor the golden nematode. If this soil pest entered Canada it could result in a world embargo on our seed potato exports from the Maritimes. It could also end the shipment of table potatoes to some currently excellent markets. The golden nematode is one pest that has been kept out. But others have come into our country to our great cost. The magnificent elm tree, for instance, is now threatened with extinction by Dutch elm disease. Hog cholera swept like a prairie fire across Quebec and Ontario. Foot-and-mouth disease dealt the cattle business a blow from which it took years to recover.

In Canada we enjoy a large measure of freedom and security from plant pests and exotic diseases of livestock. But these plague many parts of the world and hamstring both production and trade efforts. African swine fever spread to the Iberian peninsula and cost millions to control; fowl plague is rife in the Middle East; and contagious bovine pleuropneumonia is found in Australia, Asia and Russia (it has not bothered Canadian farmers, but one case was intercepted at our quarantine station). The list is endless, the implications sobering.

I enjoyed a unique opportunity to evaluate what our Health of Animals veterinarians do to protect the Canadian livestock industry when I attended the exotic diseases course on Grosse Ile. This tranquil little island in the St. Lawrence River, some 40 miles downstream from Quebec City, has a bizarre history. For many years it was the quarantine station for the disease-ravaged immigrants who fled the Irish famine. There are said to be 11,000 graves on the island.

In recent years Grosse Ile has been used as a maximum security laboratory to train veterinarians in

diagnosis of exotic diseases which presently ravage parts of the world and of which we remain mercifully free.

Now Grosse Ile is to revert to its original role as a quarantine station, this time for livestock. This change adds urgency to the pressing need to replace it with the projected maximum security laboratory in the Ottawa green belt. The World Health Organization and the Food and Agriculture Organization have a maximum security laboratory on the Brazilian mainland, the British have theirs at Purbright while the U.S., since 1954, has operated one at Plum Island, off the coast of Connecticut.

TO IMPORT CHAROLAIS

Agitation for the importation of Charolais has prompted this changed status of Grosse Ile. However, it will not be exclusively a Charolais domain. Texal sheep, for instance, from Holland, may have something to offer Canadian breeders. In the flurry of interest over Charolais, it

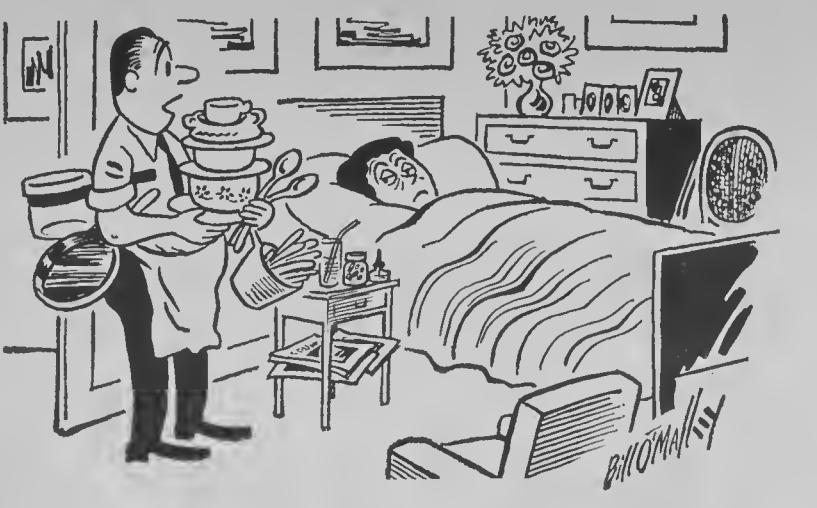
has been largely overlooked that France has long resisted the export of its best livestock and still has a blanket ban on all imports. Until recently the French have not been accustomed to purchases being made subject to health tests, but this is the first criterion for possible importation to Canada. It is quite probable that half of the original selections will be eliminated in these tests.

There is at present very little foot-and-mouth disease in Europe. If a new wave should appear, all importations would be summarily cancelled. French law requires that cattle be vaccinated against foot-and-mouth disease by 6 months of age. This eliminates the purchase, by Canadians, of any animal over 6 months of age because tests cannot differentiate between exposed and vaccinated animals.

A typical Canadian buyer will be looking for calves born this spring, with size, lots of bone and good conformation. Following on-the-farm tests, the cattle will be kept in iso-



The St. Lawrence Seaway facilitates agricultural trade, but Seaway traffic is suspected of introducing the cereal leaf beetle to the heart of this continent



"Where'll I put these?"

lation at Brest, France; all feed and bedding will have to be secured from countries known to be free of foot-and-mouth disease.

By September, providing all the tests carried out by Canadian veterinarians have been passed, the cattle will sail for Grosse Ile; they will not be permitted to touch at any port after leaving Brest. Tests will continue at Grosse Ile throughout the winter months. If even a single beast shows evidence of foot-and-mouth disease, the entire importation would be slaughtered without compensation. "These complex precautions," says Dr. Ken Wells, veterinary director general, "make the importation of cattle as safe, or safer, than the importation of semen; with semen, you could never be sure where or when it would be used."

It didn't take the American National Cattlemen's Association long to deplore the Canadian action and use it as an excuse to request a ban on Canadian importations. Last year the U.S. permitted the importation of 654,000 animals and rejected 23,500 for a variety of diseases and livestock pests. Alarms expressed over the health status of livestock and agricultural products are, however, not infrequently motivated by self-interest. Poultryman Donald Shaver, who has had some frustrating experiences in distributing his breeding stock around the globe, says, "Stringent requirements of veterinary certificates are often used as protectionist measures; in all too many cases they are used as political weapons."

REGULATIONS PROTECT MEAT

While recent events have focused attention on trade in livestock, health regulations play an essential, if less dramatic role, in the movement of meat and meat products. Health regulations go back many years in this country. Compulsory meat inspection was instituted in 1907, a move precipitated to protect sale of pork to Britain. Now the newly developing trading areas require complete data on packing plants from which meat is exported. It is becoming increasingly difficult to hurdle the certification barriers being erected by importing countries.

A common misconception is to think of exports as being synonymous with trade. Far from it. Trade is a

two-way street. To secure our exports, we must provide importing countries with assurance of the health status of our products.

Several of our federal agencies are involved in minimizing the hazards of disease. One of the busiest is the Plant Protection Division of the Canada Department of Agriculture. Last year, 722 insect species were intercepted, some of them many times. The division, under the direction of Dr. Chris Farstad, aims at keeping the risks at a minimum and trade at maximum levels. A well-oiled sleuthing operation seeks to prevent the introduction of new pests and their spread within Canada. The Plant Protection Convention provides for reciprocal action by our trading partners. The convention stipulates that barriers should only be erected on a sound biological basis; if misused, they can be potent weapons, for delay of perishables means spoilage. Such tactics can have the same effects as quotas and high tariffs.

Modern travel increases the danger of transmitting pests and diseases. In the days of more leisurely travel, incubation periods would pass before a cargo reached its destination. Now aircraft whisk livestock and produce around the globe and in the process may carry pestilence with them. An aircraft which flew from New Jersey to Newfoundland via the Azores, France and the U.K., arrived with four species of beetle of which we are free. The St. Lawrence Seaway, of great benefit to agriculture, also presents hazards, providing a passageway, as it does, into the heart of the corn belt. This is the suspected route taken by the cereal leaf beetle to gain access to America. It now infests three states adjacent to Canada and is regarded by Dr. Farstad as possibly the worst cereal pest introduced to North America.

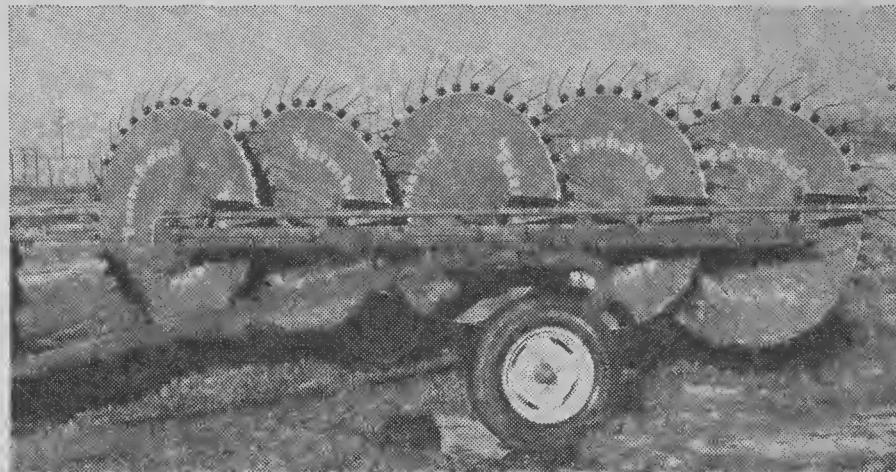
"People," says Farstad, "are traditionally pack rats; heather, shamrock and plants of sentimental value are continually being intercepted in baggage and the mails."

Freedom from disease is a vital link in our agricultural trade. High standards are an ace card in a buyers' market. Says Farstad proudly, "There isn't any wheat moving onto world markets which has as high a standard of cleanliness as Canadian wheat." V

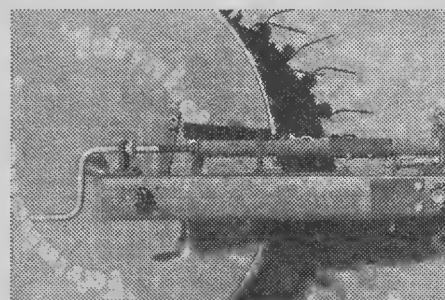
"WHEEL RAKING"

with a new FARMHAND

is fast, clean and costs less!



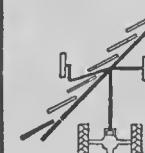
TRY IT ON YOUR FARM, with one of Farmhand's new "F-series" rakes. You'll like the clean, gentle raking action of Farmhand's independently-suspended wheels and patented double-coil spring teeth. You'll like the low initial cost. And with no gears, ratchets, belts, pulleys, etc. to wear out, maintenance costs are practically eliminated. The Model F-5 shown here rakes a 7½' swath, is easy to adjust to narrower swaths or for offset raking, makes an excellent windrow turner too. Exclusive "Add On" feature lets you rake up to 11'.



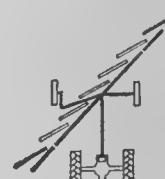
"ADD ON" FEATURE consists of kit containing bolt-on frame extension, crank, extra rake wheel and accessories. Hand crank raises and lowers all rake wheels simultaneously.

MONEY-SAVING VERSATILITY

ADD 1 EXTENSION KIT front or rear to make a 6-wheel F-5 or 8-wheel F-7.



ADD 2 EXTENSION KITS front and rear to make 7-wheel F-5 or 9-wheel F-7.



RAKE UP TO 14' with this big, rugged Model F-7, plus two extensions. Basic F-7 rakes an 11' swath. It adjusts for offset raking up to 8'. Crank or hydraulic-adjusted raking wheels. Rakes on rough or rocky ground without damage. No skipping of low spots, no slipping or sliding. This rake is unmatched for efficiency. No rake does a better job.



Farmhand Windrow Turner, with 2 raking wheels is available to fit any tractor.

Farmhand
FIRST IN FARM MATERIALS-HANDLING

FREE
Information!

Write:
FARMHAND
Dept. CG-45W
1270 Sargent Avenue
Winnipeg 21, Canada

FOBANO, LTD.,
Plessisville, Que.
Distributor for Quebec and Maritime Provinces.

Send free information on
I am a student,
send special material

Name.....

Address.....

Town..... Prov.....
Division of Daffin Corporation of Canada, Ltd.

CASE
4-Wheel Drive
gives you
Usable Power
...for more
Earning Power



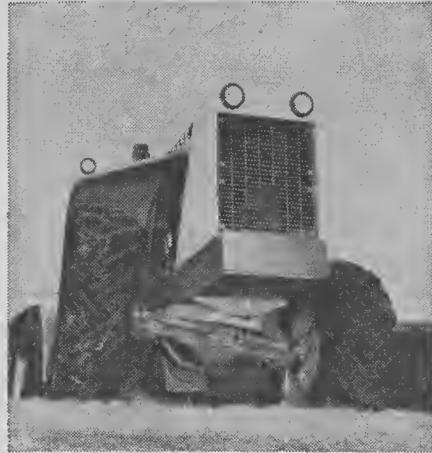
The 1200 Traction King, powered for the man who thinks big.



4-WHEEL DRIVE The 1200 puts its 119.9 hp (PTO) through planetary hubs to four huge wheels of equal size. With the 15,000 pound weight of the 1200 you eliminate the excessive slippage that robs your drawbar power.



4-WHEEL STEERING Gives you precision control of implements and full power on the turns. You can steer with either the front or rear wheels, or with all four under power at the same time. Turning radius is only 16½ feet.



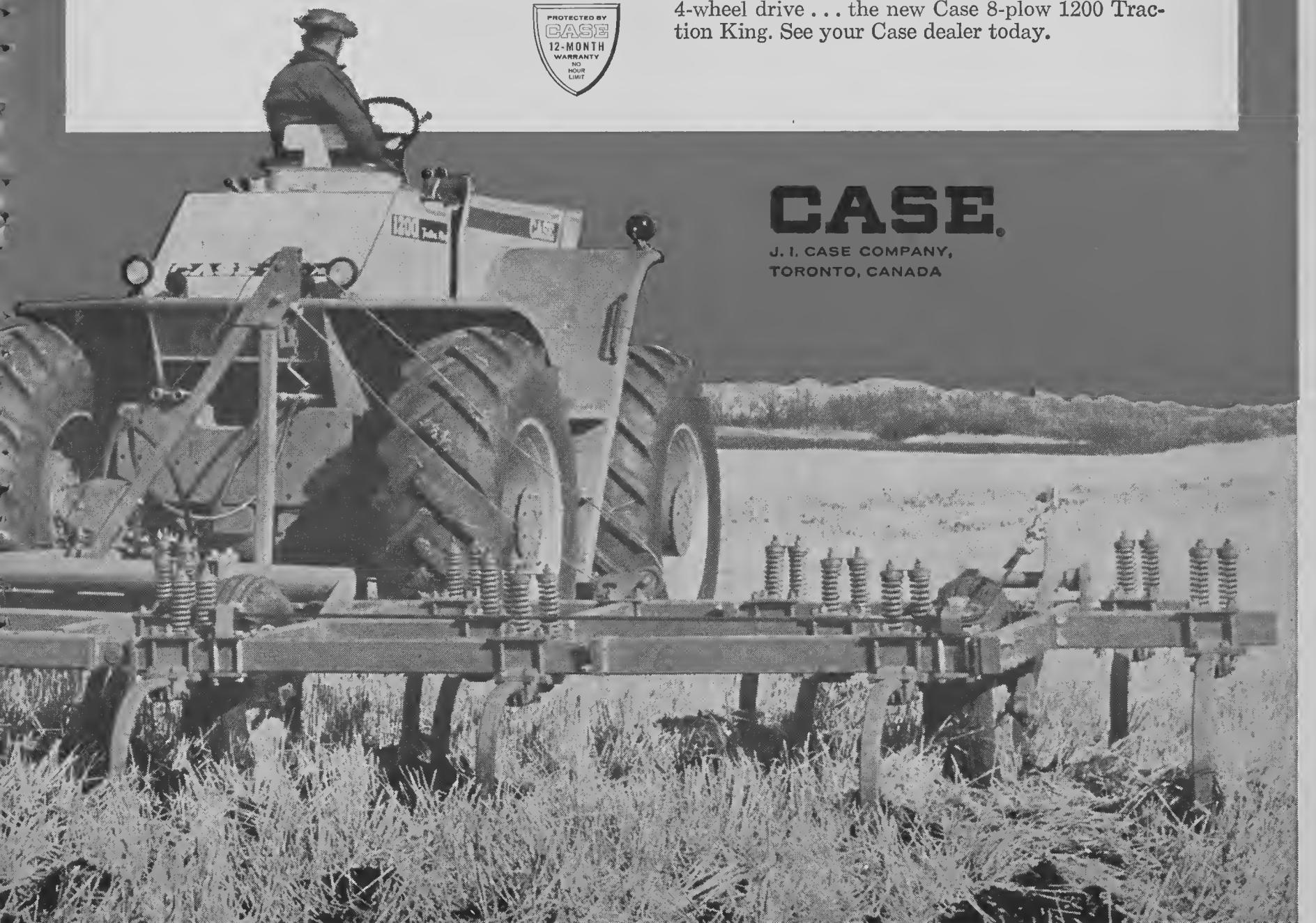
4-WHEEL STABILITY The standing weight of the 1200 is distributed approximately 60% in the front and 40% in the rear. Under load, weight equalizes over all four wheels, resulting in correct balance, maximum traction and easy handling.

In every class there is a Case Power Team powered right, priced right for maximum earning power! Here is truly big power for the big spreads. *More important, here is big power with the traction to put it to productive use.* One man, easily controlling the flow of giant power through four big wheels, can do as much work in a day as



two or three operators with smaller 2-wheel drive tractors. Under normal conditions, the 1200 handles eight-bottom moldboard plows, 26 feet of chisel plow, 33 feet of disk harrow, 48 feet of lister press drill and other equipment of similar power requirements. One man can plow up to 65 acres a day, chisel 100 acres or more. Get the full story of *big usable power harnessed to full use with true 4-wheel drive . . . the new Case 8-plow 1200 Traction King.* See your Case dealer today.

CASE.
J. I. CASE COMPANY,
TORONTO, CANADA



You Can Control Supplements with Salt

FEEDING protein-mineral supplements to range cattle during the winter is now common practice. Unfortunately, if the supplement is free fed, bossy animals tend to get more than they require while shy

and nervous types will not get enough.

According to L. M. Bezeau, animal nutritionist at CDA's Lethbridge station, one method of overcoming this is to control the supplement

intake by adding salt. Since there is a limit to the amount of salt an animal will consume in 1 day, this method controls the consumption of the ingredients mixed with it.

If the mixture contains 75 per cent protein concentrate, 15 per cent salt, and 10 per cent mineral, an animal will eat about 1 pound of protein concentrate. It will eat about 1½ pounds if the mixture contains

With Cyanamid's all-new Poultry Health Profit-Maker Plan featuring

GUARANTEED AUREOMYCIN®



you can now

PLAN FOR BIGGER Poultry PROFITS!

Nothing sends your cost of raising poultry out of bounds faster than disease! It's a constant threat. That's why alert growers look for the soundest, most efficient way to keep disease out of flocks. Your soundest

way? Follow Cyanamid's new Poultry Health Profit-Maker Plan! Your feed dealer or manufacturer has a free copy of this plan for you, or write direct to Cyanamid for your free copy.



a flock of reasons why you should follow it!

MAXIMUM DISEASE CONTROL! Trials prove conclusively the power of AUREOMYCIN in controlling CRD and AIR SAC INFECTION in chicks, . . . CRD and AIR SAC INFECTION, BLUE COMB, PARATYPOHID and HEXAMITIASIS in turkeys. Other time-tested Cyanamid antibiotics and vaccines outlined in the Plan for effective control of other poultry diseases.

IMPROVED FEED EFFICIENCY! Young birds really respond to Potentiated AUREOMYCIN in starter feeds. They need less feed to make a pound of gain. They put on weight fast—early in life—when your feed costs are lowest! Complete details included in Cyanamid's new Poultry Health Profit-Maker Plan!

INCREASED EGG PRODUCTION! With AUREOMYCIN in the feeds, hens don't waste feed fighting diseases. They use it to produce more eggs. Broilers use it to substantially increase weight gains! Fed to turkeys, it means faster weight gains, improved feed efficiency and shorter time to market.

©Reg'd Trademark—AUREOMYCIN is Cyanamid of Canada's trademark for Chlortetracycline.

FEWER SETBACKS! Cyanamid's new Poultry Health Profit-Maker Plan reveals how easy it is to prevent setbacks with treatment feed containing AUREOMYCIN. Keeps birds holding on to their early gains by keeping them healthy. Helps them maintain good health all the way to market, bring biggest returns!

LOWER COSTS! This Plan lowers the cost of raising broilers, layers and replacements, turkeys, by reducing mortality rate, increasing feed efficiency, preventing setbacks. By helping you rear more healthy, well-doing birds through the elimination of your biggest risk to profit—disease!

BIGGER MARKET RETURNS! Your end result when you follow Cyanamid's new Poultry Health Profit-Maker Plan: bigger market returns! Follow this Plan, because it pays. There isn't another scientific poultry health plan to be found today to equal this Plan's ability to bring you bigger poultry market returns. Get your free copy at once from your feed dealer or manufacturer.

Cyanamid of Canada Limited, 635 Dorchester Boulevard West, Montreal 2, P.Q.

Closest thing yet to poultry profit insurance—Cyanamid's new Poultry Health Profit-Maker Plan!

BE SURE TO FOLLOW INSTRUCTIONS ON THE FEED BAG AND/OR LABEL

80 per cent protein concentrate, 10 per cent salt, and 10 per cent mineral. If the mixture contains 85 per cent concentrate, 10 per cent salt, and 5 per cent mineral, an animal will consume about 2 pounds. For best results, the mixture should be fed in ground form rather than as pellets. The protein concentrate may be rapeseed, linseed, sunflower, soybean meals, or a commercial mixture. The mineral portion may be bone meal, dicalcium phosphate, or a commercial mineral mix.

These salt-protein-mineral mixtures are guides only. Some adjustment of the salt content may be required to insure that cattle eat the correct amount of supplement.

All livestock have a high salt tolerance if they have free access to water. For this reason, it is very important that water always be available. Experiments have also shown that a high salt intake reduces the incidence of urinary calculi in cattle. Sufficient stabilized vitamin A may be added to the mixture to provide a daily intake of 20,000 I.U. per head. However, a fresh batch should be mixed at least every second week because even stabilized vitamin A is not very stable in salt if it becomes the least bit damp.

A periodic check to insure proper rate of consumption is necessary because:

- Cattle develop a tolerance for salt and the amount may have to be increased.
- Large animals will consume a ration higher in salt than small animals.
- More salt is required to control the meal intake as the calves grow.
- On summer range it may be desirable to increase the concentrate intake by reducing the salt content, as the quantity and nutritive value of the grass decreases.
- During cold spells, when cattle drink less water, they may also consume less of the salt-protein-mineral mixture.

Although the feeding method will reduce labor costs, there are other aspects to consider. The cost of extra salt and the need to build suitable feeders to protect the supplement from wind and rain are added expenses. Another disadvantage is that the animals probably will not be inspected as frequently. However, the method should be considered to determine if it has merit in a management program. ✓



"A good hired hand is hard to find and harder to keep!"



U.G.G. must have good agents

If your son has these two important qualities, he may be interested in a career with United Grain Growers:

1. He must be absolutely honest.
2. He must be a hard worker.

Fortunately, there are plenty of farmers' sons with these qualities.

That leaves one problem: even an honest, hard working young man from a farm has to learn the grain business thoroughly before he can be a good agent. He has to know the intricacies of grain grading, correct fertilizer and herbicide use, and a dozen other important, difficult things. Just as essential, all U.G.G. agents are expected to be sympathetic to the farmers' cause and to look after the farmers' interests in all matters.

How can a young man learn so much in a hurry? United Grain Growers has developed an Agents' Basic Training Program. With this Program, young, intelligent men get the concentrated experience of the best men in the grain business.

Take the grain grading part of the Basic Training Program. U.G.G. Grain Inspector Joe Lazenby often takes personal charge (see picture above), and in his final exam each young agent must grade 50 tough samples accurately . . . and know the reasons why. If an agent isn't skilled at grading, he can't be a good agent!

That's only part of the Agents' Basic Training exam. A young agent must answer questions on everything from his responsibilities to the U.G.G. Local Board, to the method for taking an accurate soil sample. Try your own hand at some of the U.G.G. Basic Training questions.

United Grain Growers needs many new agents every year to replace men who are retiring and to open new points. Finding them requires a big program, and U.G.G. is working hard at it. The aim is straightforward: a good agent must be at every U.G.G. elevator.

You have a right to expect that kind of service because farmers own this Company.

Questions

1. Outline the procedure to be followed in event of a dispute over grading between a farmer and an elevator agent.
2. What percentage of ergot will 3 CW Rye carry?
3. How many stones are allowed in the grade of 3 CW 6 Row Barley before it will grade "rejected"?
4. What is a Grain Appeal Tribunal?
5. A sample of Red Spring Wheat with 20% broken wheat left in after cleaning will grade?
6. A sample of 3 CW 6 Row Barley contains 5% wild oats, 4% small seeds. What dockage would you place against this sample?
7. Why do the Malting Companies refuse Barley with excessive hull damage?

Answers

1. The agent should take his grain "Subject to Grade and Dockage," and issue the proper tickets. The sample is then forwarded to the Board of Grain Commissioners asking that the grain be examined and to report on the grade and dockage that the grain is entitled to and would receive, if shipped to a terminal point and subjected to an official inspection. This sample should contain at least two pounds of the grain, and if a moisture test is required, at least eight ounces should be enclosed in a metal, air-tight container. The sample will be graded in the inspection offices and both parties will be notified of the grade and dockage of the sample submitted. The interim tickets may then be exchanged for cash or graded storage tickets. The Chief Grain Inspector's decision is final and binding on both parties.
2. $\frac{1}{2}$ of 1% (over this is CW Ergoty Rye).
3. 3 stones in 500 grams.

4. A Board of Appeal set up the Board of Grain Commissioners to review appeals made by persons who are dissatisfied with the grading of such grain by an inspecting officer. A Grain Appeal Tribunal consists of 9 members: a chairman who is qualified under the Grain Act to be an Inspector of grain, and 8 competent persons who are not members of the inspection staff. Their decision is final.
5. Sample Red Spring Wheat Broken.
6. 8% dockage (not 9% since 1% allowed in 3 CW 6 Row Barley).
7. The sprout emerges at a right angle to the kernel, instead of underneath the hull. The sprout is often broken off and thus the malting process is stopped.



The Farmers' Company

Creep Feeding Gives Heavier Calves

CREEP FEEDING of beef calves is a specialized practice because not all farms and ranches lend themselves to this plan. According to Dr. R. A. DePape, the value of creep feeding depends on: (1) The price and availability of feed; (2) whether you are raising fat calves, feeders or breeding stock; and, (3) the quality of your calves.

Under average farm or ranch conditions, creep feeding will generally give you heavier calves at weaning—all the way from 11 lb. to 134 lb. heavier than calves not creep-fed, recent reports show. On the average, a creep-fed calf will be about 50 lb. heavier.

"In some beef herds the cows are inherently poor milkers," Dr. DePape, who is with Hogg-Dawes Laboratories Ltd., Toronto, explained, "or they may not give enough milk during periods of drought or overgrazing, or if there are soil nutrient deficiencies. Under these conditions creep feeding will pay you handsome returns. You can get that extra 100 lb. of weight with 200 to 500 lb. of ration, depending on the pasture and the quality of your calves."

Calves that are creep-fed grow more uniformly in size and condition, and therefore often command a premium price. Creep feeding provides a market for your home-grown

grains, which usually make up the bulk of the creep ration. No supplemental protein is generally needed while the calves are still receiving milk.

Cows whose calves are creep-fed do not lose as much weight during the nursing period, and the calves show a tendency to wean themselves earlier. Thus calves can be sold as feeders before the bad weather begins.

The weaning process is simplified when you creep feed because calves develop more independence. This means there is less bawling, stress and loss of weight when they are separated from their mothers. Since your calves are already used to a dry feed and feed bunks, weaning provides no radical change in their feeding routine, and therefore there is much less shrink. By avoiding the usual 3 to 4 weeks in getting on a new feeding program, your calves are ready for market 40 to 60 days sooner, with the resulting saving in labor and investment costs.

However, there are some limitations to creep feeding, Dr. DePape warns. Creep feeding requires extra time, equipment and patience to get your calves on feed. It will also be hard for you to select replacement heifers on the basis of their dams' milking ability if your calves are creep-fed. Calves on good milkers,



Guide photo

These calves should be about 50 lb. heavier at weaning, if they are creep-fed

which are grazing good pasture may not be interested in eating the extra feed you provide for them. It is also thought that a high-concentrate creep ration might retard rumen development and reduce roughage consumption on pasture.

The Creep Ration

The main requirement of a creep ration is to supply additional energy. A high protein content is not necessary as long as the cows are milking well—12 per cent protein is generally enough at this stage. However, when the milk flow of your cows slows down, or the grass becomes too mature, it may be necessary for you to increase your protein to 15 or 16 per cent.

A creep feed must be fresh and palatable, especially at the beginning when the grass is lush and milk production is so high that your calves eat little extra feed. You must take care that the feed never becomes damp or moldy. This can cause your calves to go off feed and then founder when fresh, palatable feed is again made available. For the same reason you should never let the feeder get empty, or change your feed suddenly.

"Calves will start to eat grain between 3 and 4 weeks of age," Dr. DePape said. "If possible, get them started before the herd goes to pasture."

Whole oats and bran are often used to start calves eating. The young animals will take both very readily. Once they are feeding, you can stop the bran and introduce other ingredients, such as:

70 per cent ground barley and 30 per cent whole oats.

60 per cent ground barley, 20 per cent ground oats plus 20 per cent beet pulp.

40 per cent ground barley, 30 per cent ground oats, 30 per cent beet pulp, plus protein.

Just before weaning, you should increase the protein content to compensate for the loss of milk protein and declining forage quality. A complete nutrient balance becomes very important at this time because this feed forms much of the total intake. Mineral needs are higher than at any other time because of rapid bone and tissue development during this rapid growth period. This not only includes major minerals such as calcium and phosphorus, but also an ever-increasing number of necessary trace elements.

"Vitamins must be carefully considered too," Dr. DePape concluded. "When the lushness of grass is lost, vitamin A becomes very important, particularly under drought conditions. Vitamin A deficiencies are being diagnosed, even when calves are on adequate rations that are high in carotene. It has become common to supply animals with 20,000 I.U.'s per head per day. Recent tests indicate that vitamin D, and even vitamin E supplements are beneficial. Antibiotics are also frequently used for short periods to combat stress and reduce the incidence of disease which cause set-back at this critical time of weaning."—C.V.F. ✓

"GILLETT'S

makes sure there's no
disease germs lying around"

Ray Dennis is manager of the Sow Unit of Prairie Agencies Ltd., part of a large, modern hog operation near Weyburn, Saskatchewan. An indication of the sound management of this unit is its success in farrowing an average of over ten pigs per litter on 115 sows and weaning over nine pigs to the litter.

To keep down disease, parasites and insects, Ray insists on the use of Gillett's Lye as an important part of the sanitation program. After each litter the farrowing and brooder pens are washed down with Gillett's Lye solution, and three times a year an extra special scrubbing that includes alley-ways is carried out. "Gillett's Lye makes sure there's no disease germs lying around," says Ray.

No other product you can buy does so many cleaning and sanitizing jobs, and does them as inexpensively as Gillett's Lye.



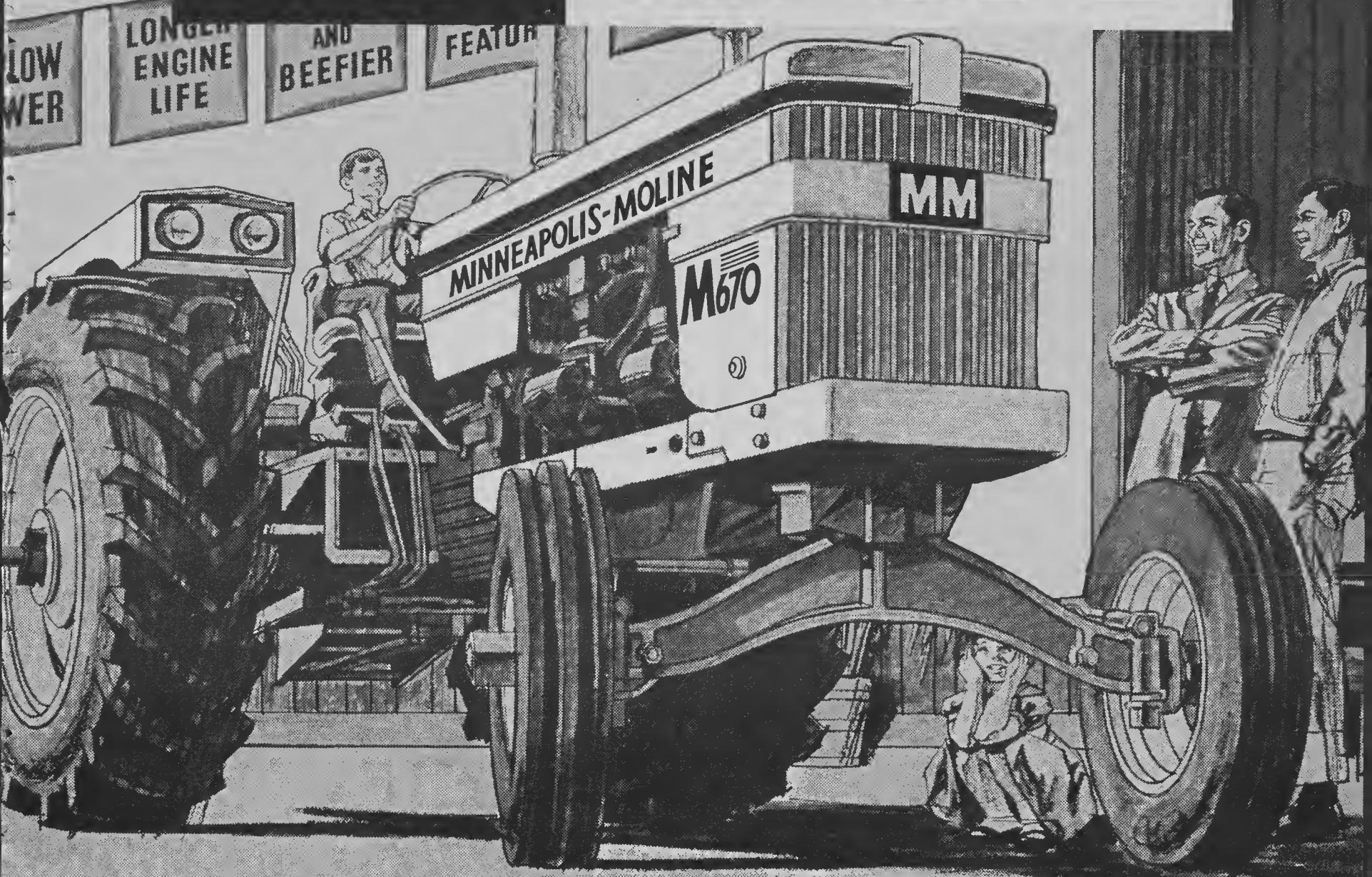
FREE!

60-page booklet prepared by an eminent Canadian Bacteriologist outlines effective, economical sanitation practices which can save you time and money. To get a copy, write: Standard Brands Ltd., 550 Sherbrooke St. W., Montreal.

In Regular Size and Money-Saving 5 lb. Cans



NEW! MINNEAPOLIS-MOLINE M-670



16% more power...22% more pull

Minneapolis-Moline introduces a new force in power farming, the M-670. With 16% more power—high torque power—it develops 22% more pull—enough to work an extra plow—and then some!

The new power story: More in the engine—redesigned pistons, rods, camshafts and valves—new fuel systems for gasoline, propane and diesel—to give you 16% more power than you would expect in an engine of this size.

The new performance story: Re-engineered power train—improved Ampli-Torque 10-speed transmission, new low-reduction final drive, larger bearings, bigger splines—with the result that the increase in pulling power actually exceeds the increase in engine power!

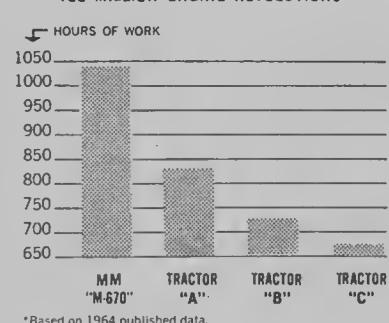
The new-feature story: New, removable grill and hood. New dry-type air cleaner. Improved hydraulics. New, stronger

drawbar design. New side frame adapts to all implements. New split wheel weights for easy installation. Functional fender design with new flood, utility and road lights. Improved control-zone comfort.

And more hours of power! All Big MM Tractors give you more power per piston stroke than other tractors. Fewer engine turns mean less engine wear...more hours of power, more years of work.

Longer life proved: Look at the chart and see. With the M-670, you get 1041 hours of power-packed work for every 100 million engine revolutions. With other tractors, only 667 to 833 hours of work for the same number of turns!

HOURS OF WORK PER 100 MILLION ENGINE REVOLUTIONS*



*Based on 1964 published data.
The "long-life" engine in the big M-670 delivers more operating hours of work for every 100 million engine revolutions than other tractors in the same HP class.



FREE!

Engine Life Analysis

See your Big MM dealer for a test drive today. And be sure to ask for a free Engine Life Analysis comparison with any other tractor you are considering. You'll be amazed at the results of this comparison—and at the long-life power of the great, new M-670.

Instant Sire Evaluation?

Ultrasonics now offers real assistance to livestock breeders

ONE HIGHLY publicized event at the Royal Winter Fair was the ultrasonic evaluation of 67 steers; the really interesting data, however, came subsequently, when the actual carcass evaluation could be compared with the ultrasonic readings.

The rib eye area or loin eye muscle measurement provides a

good indication of the lean meat content; it is a valuable factor to the beef breeder because it is 70 per cent heritable. Steer No. 45 had a rib eye area of 10.77 square inches; the ultrasonic reading indicated a rib eye area of 10.80, an error of only 0.03 square inch. At the other extreme, steer No. 54 had

an actual rib eye area which exceeded the estimate by 3.80 square inches.

Fat thickness was also measured and the ultrasonic evaluation was accurate, in two instances, to the second decimal point. The numerous instances, in both fat and muscle evaluation, which were fairly accurate indicate that ultrasonic evaluation has something to offer the livestock industry. The readings which were inaccurate may be explained by the large number of readings which were taken under less than ideal circumstances; if the animal moves, and uniform contact is not maintained, a margin of error creeps in. Greater time and care would be taken in evaluating a possible herd sire; in fact, one large bull stud has used ultrasonic readings as a further guide in selection of sires.

Dr. James Stouffer of Cornell University, who participated in the tests at the Royal, says, "I'm very optimistic that the tool offers the greatest contribution for practical conditions; it doesn't replace scales, it complements their use."

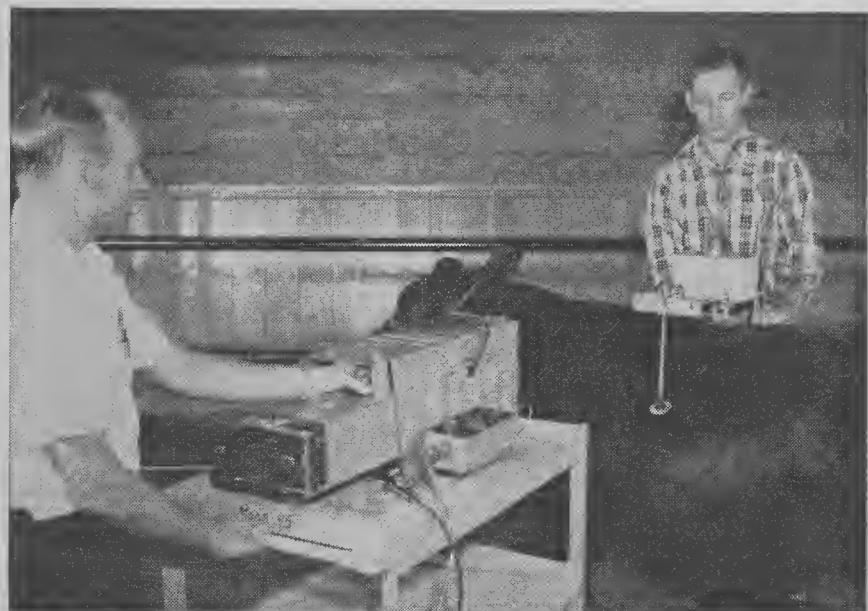
When Stouffer began experimenting with ultrasonics back in 1958 the equipment used was actually designed for testing metals for flaws. It was temperamental and Stouffer counted himself lucky to get a reading of the muscle in a small lamb. In the intervening years the equipment has been refined and a much cheaper machine, specifically designed for livestock improvement, is now on the market. By integrating a Polaroid

camera with the ultrasonic tester, it is now routinely possible to get a completed photograph of the "survey" area, in just 10 seconds. Owing to the great variation in size and shape of the rib eye muscle a complete cross section is necessary to accurately evaluate it.

"The term ultrasonic," explained Stouffer, "refers to sound waves or vibrations at a frequency above the audible frequency range of the human ear. Ultrasonic energy can be focused into a narrow, almost parallel beam."

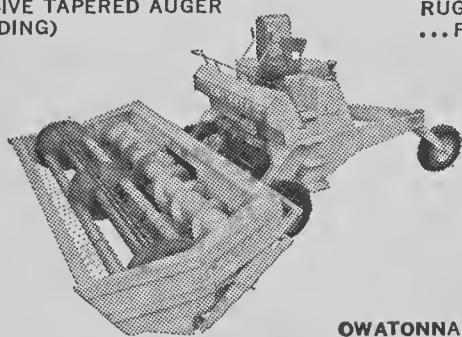
"High frequency sound waves will pass through most solid materials. When the waves strike the boundary between two materials of different density some of the energy is reflected. The time taken for a pulse to travel through a given material and return to the source, after reflection at the boundary, depends on the thickness of the material and the velocity of sound in it. In the case of meat animals, the reflecting boundaries are: between fat layers; between fat and lean; and between lean and bone."

Livestock improvement is a long, slow business; ultrasonics gives promise, not only of speeding up the process, but of avoiding some mistakes in sire selection. It is a useful adjunct to visual appraisal. However, ultrasonic testers are hardly likely to become standard farm equipment. Only supervised readings by a detached evaluator would be widely accepted. Ultrasonic readings would have to enjoy the same integrity as ROP results.—P.L. V

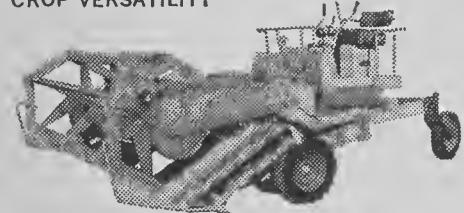


Cornell University photo
Dr. J. Stouffer (l.) is a pioneer in ultrasonic evaluation of meat animals. One large breeder has already used the tester as a guide in sire selection

IMPERIAL 92 AUGER HEADER
WITH EXCLUSIVE TAPERED AUGER
(PATENT PENDING)



OWATONNA 29
UNEQUALLED
CROP VERSATILITY



OWATONNA

Quality Farm
Machinery
Since 1865

OWATONNA MFG. CO., INC.
Owatonna 4-V, Minnesota

Please send free information on the following:

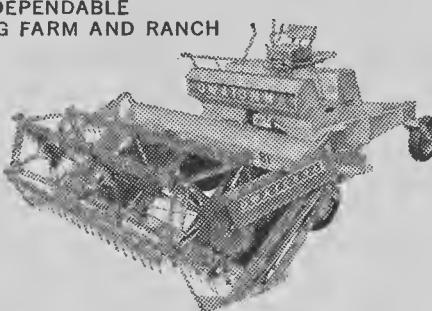
- Self-Propelled Windrowers (Model No.)
- Mixer and Mill
- I am a student, send special material.

NAME _____

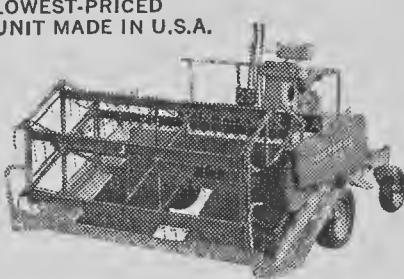
ADDRESS _____

OWATONNA FARM MACHINERY IS MARKETED THROUGHOUT
CANADA. WRITE FOR THE NAME OF YOUR NEAREST
DISTRIBUTOR OR DEALER.

IMPERIAL 81
RUGGED AND DEPENDABLE
...FOR THE BIG FARM AND RANCH



OWATONNA 25
LOWEST-PRICED
UNIT MADE IN U.S.A.



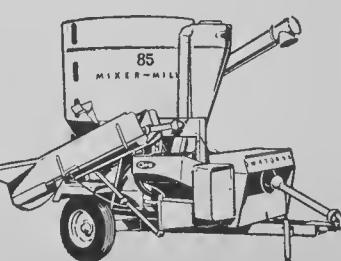
OWATONNA 30
EFFICIENCY FOR
ANY FARM



SELECT THE OWATONNA THAT FITS YOUR OPERATION

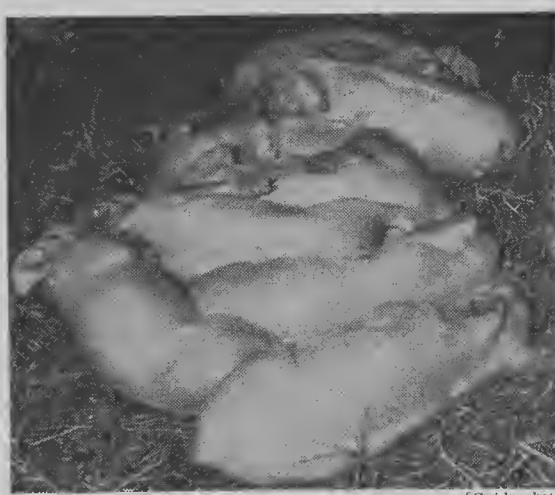
Unless the windrower you buy fits your acres and special crop harvesting needs, you'll get only a taste of *real* windrower efficiency. Why attempt to use a windrower that's too big or too small—or one lacking the features you want—when you can choose from an entire Owatonna Fleet. Owatonna offers 5 windrowers, 5 different machines that vary in size, operating features, heft and price. One of them is right for your farm...that's the one to buy. It will give you the harvesting speed, improved quality and yield you're buying a windrower for. Owatonna—originators of the self-propelled windrower!

OWATONNA MIXER AND MILL
Commercial - unit capacity, exceptional blending ability and the most versatile unloading system ever built. Two models.



Five More Pigs per Sow

by • Keeping the sow herd healthy
• Early weaning and breeding
• Crossbreeding



This litter will repay the producer for his extra efforts in sow management

CAN CANADIAN hog producers market 2 to 5 more pigs per sow every year? Dr. L. Combs, of the Animal Science Department of the University of Alberta, says yes. ROP records show that producers save only 7.5 pigs per litter. "Many sows are not producing two litters per year so that producers may only be marketing 12 to 15 pigs per sow per year," says Dr. Combs. "In 1963, one of our best Alberta producers marketed 17 pigs per sow."

Herd health can be an important factor. For example, an outbreak of gut edema at the University of Alberta reduced the number of pigs marketed per litter from 8.6 to 5.6.

Producers can also rebreed sows more rapidly. Present feeding practices permit weaning young pigs at 3 weeks. Sows should be bred at the first heat following weaning. "The practice of delaying mating to the second heat is equivalent to carrying one dry sow for each nine that are farrowed," says Dr. Combs.

Fertility can be a problem. Dr. Combs says as many as 25-30 per cent of gilts do not show heat unless given access to a boar. Producers who hand-breed can quickly find out which sows are in heat by putting a boar with them every day.

In trials at the University of Alberta, 7.5 pigs were marketed per litter from purebred matings. When crossbred sows were mated to boars of a third breed, 8.5 pigs were marketed per litter. Dr. Combs points out that there are three excellent breeds available for crossing: the Lacombe, Landrace and Yorkshire. Any commercial producer who does not use two breeds or, better still, all three breeds in a crossing program is passing up a bonus of one pig per litter. However, crossbreeding only offers improvement in growth, feed efficiency and carcass quality if superior breeds and sires are selected.

Dr. M. E. Seale, of the Department of Animal Science at the University of Manitoba, suggests several crossbreeding systems that the commercial hog producer can use. Here they are, with examples:

Single Cross

Lacombe sire x Yorkshire dam.
All crossbred progeny are marketed.
Replacements are purebred.

Backcross

York sire x (Lacombe x York dam);
Lacombe sire x (Lacombe x York dam).

Three-breed Cross

Landrace sire x (Lacombe x York dam).
Crossbred females are superior in number of pigs farrowed and milking ability.

Criss-cross

first generation—
second generation—
third generation—
fourth generation—

Lacombe sire x York dam;
York sire x 1st generation dam;
Lacombe sire x 2nd generation dam;
York sire x 3rd generation dam.
Producer continues to switch the breed of the boar, using progeny of the last cross for sow replacements.

Three-breed Rotational Cross

first generation—
second generation—
third generation—

Lacombe sire x York dam;
Landrace sire x 1st generation dam;
York sire x 2nd generation dam;

fourth generation—
fifth generation—

Lacombe sire x 3rd generation dam;
Landrace sire x 4th generation dam.
Producer continues to rotate the breeds of boars, always using them in the same order.

The advantage of the last two systems is that a producer rears his own sow replacement. In all systems the sires are purebred and should be selected on basis of carcass quality, growth and feed efficiency. ✓

Farming with Alcan

BEEF AND DAIRY CATTLE PRODUCERS!

ARE YOU

Check here

- Getting 600 to 1,000 lbs. of beef per acre?
- Producing \$400 worth of milk per acre?
- Raising beef at a net cost of 12.5 cents per lb. of weight gain on forage or pasture?
- Getting 4 tons of hay per acre?

If you're not you need an ALUMINUM SPRINKLER IRRIGATION SYSTEM!

Don't rely on fate — irrigate! Proper irrigation management can improve your pastures, increase your hay crops up to 100%.

Lightweight ALCAN Aluminum tubing assembles easily, moves in moments — for water whenever, wherever you want it. Flexible couplings let you lay it over rolling or hilly ground without difficulty.

Look for the ALCAN label for tubing that resists corrosion, gives years of trouble-free service.

For free irrigation system information send the following coupon to your nearest Alcan Sales Office.



Alcan Aluminum Company of Canada, Limited

1070 Elveden House, 717-7th Ave. S.W., Calgary, Alberta.
701-1281 West Georgia St., Vancouver 5, B.C.
360 Broadway Ave., Winnipeg, Manitoba.

Please send information on Aluminum Sprinkler Irrigation System to:

NAME _____

ADDRESS _____

GW4

Copper Deficiency Areas

ADDING COPPER to the rations of cattle and sheep has cured a wasting disease peculiar to certain areas of Ontario, according to Assistant Prof. D. Arthur, of the Department of Nutrition, OAC. Copper deficiency may be of two types: Simple copper deficiency or "conditioned" copper deficiency. A simple deficiency is due to a lack of copper in the feed. The "conditioned" deficiency is not due to a lack of the mineral in the feed but to an excess of another mineral, molybdenum. This happens when the feed is grown on soils that have a high molybdenum content. A high level of molybdenum prevents proper utilization of copper in the animal body. In farm animals ruminants are chiefly affected.

In Ontario this has happened in Dundas and Carleton Counties, where there are large areas of poorly drained peat soils. Dairy cows suffer from scouring and general poor health, with resultant lowered milk production. Young stock grow very slowly when they are pastured on these fields. Many of them never reach full size at maturity, and cannot produce to their full potential.

Adding copper to the animals' rations to overcome the effect of excess molybdenum has been successful. In the Dundas-Carleton area a controlled amount of copper is added to the mineral supplement fed to the animals, either in the meal or free-choice from mineral boxes. The copper is usually supplied in form of copper sulphate at

a level of 1-2 grams of copper sulphate daily.

Because of the poisonous nature of large amounts of copper sulphate, the amounts used must be carefully controlled. Preparation and distribution of the copperized mineral supplement has been under the supervision of the Department of Nutrition, Ontario Agricultural College, Guelph, and the Regional Veterinary Laboratory in Kemptville. Officials of these laboratories visit farms where the disease is suspected and analyze the forages and the blood of the animals before recommending the use of copper supplement. At present there are 35-40 herds under treatment. V

Urea in Livestock Rations

MICRO-ORGANISMS in the rumen of cattle and sheep can use non-protein nitrogen to make protein. The practical value of this is that we can feed low-quality protein to cattle and sheep, and that we can supply part of the protein requirement with non-protein compounds such as urea.

Urea is over 40 per cent nitrogen. On this basis, its protein equivalent value is 262 per cent, or in other words, 1 lb. of urea contains 2.62 times as much nitrogen as 1 lb. of protein. According to Dr. G. K. MacLeod, OAC, up to one-third of the protein requirement of cattle can be

met with urea. Higher levels of urea nitrogen result in toxicity problems.

Producers of commercial protein supplement may replace part of the protein in the supplement with urea in accordance with the Feeds Act of Canada. They do so when urea is a cheaper source of nitrogen than other protein-rich feeds.

On-the-farm mixing of urea for cattle is not recommended. Small quantities are not economical and proper and thorough mixing is needed to avoid feeding and health problems. Urea does not supply energy and is not palatable so that it is better mixed commercially with more acceptable feeds and high energy grains, and fed according to manufacturers' recommendations.

Do not feed urea to swine or poultry. Even cattle and sheep require an adjustment period of several weeks before top utilization is made of urea rations.

Recently you may have heard of very high urea supplements. These simply contain relatively more urea, and since they are more concentrated, fewer pounds are fed per day. Follow the instructions on the label when you use these supplements. They are only recommended for high energy rations.

Urea can be added to corn silage during harvest at either 20 lb. per ton or 10 lb. plus 10 lb. ground limestone per ton. Some discomfort may be experienced by men entering

Livestock

the silo during filling operations. The urea must be thoroughly mixed in, and on full feed, silage intake may be lower.

Urea is also available in liquid form combined with molasses and other compounds. Cost is the main factor in using urea in either liquid or solid form. It should always be used according to standard recommendations. V

Heavy Calves Finish Sooner

CALVES HEAVIER at weaning tend to reach top choice slaughter grade sooner than lighter ones. But they will be heavier before reaching this grade. These heavier calves also have a larger portion of their carcass weight in the valuable cuts when slaughtered at a standard live grade.

This is the conclusion of University of Wisconsin livestock breeding specialists.

However, it was found that the heavier calves were not as efficient feed converters immediately following weaning. They suggested that the heavier calves underwent more stress and adjustment when they were taken away from their heavy milking mothers. Another possibility is that the heavier calves put on more of the added weight as fat which is put on less efficiently than lean. V

successful
feeders
across
Canada
choose
MIRACLE

Keep Egg Production High! You can eliminate cage fatigue with "Miracle" Cage Layer Ration. It is highly fortified and contains specific nutrients that are so essential to meeting the deficiencies that can occur with caged birds. By feeding "Miracle" Caged Layer Rations, you can avoid production slumps caused by stress factors. Available in crumble form. Ask for "Miracle" Caged Layer Rations at your "Miracle" Dealer's.





Get the smoothness of two front axles and a Six that feels like an Eight

You'll have to ride in this new Ford-Built Pickup to believe that any pickup can ride so well.

There are *two* front axles. They work independently so that jolts at one wheel are never transmitted to the other.

The front end doesn't "mush out" on sharp

curves. Virtually no dive when you apply brakes.

On the highways or even off-the-road, you'll find that Twin-I-Beam rides far smoother.

New high performance 6 cyl. engines.

There are two, new seven-mainbearing Sixes—the 240 cubic inch Six with 11% more horsepower

and the 300 cubic inch Six with 17% more horsepower than the engine it replaces. The new 352 cubic inch V-8 is the most powerful in Ford Pickup history.

See this smooth riding pickup at your Ford or Mercury Dealer soon!

'65 FORD-BUILT

TWIN I BEAM

PICKUPS

BUILT TO LAST LONGER



Reason for the smooth ride is exclusive new front suspension with *two* front axles. Each works independently so that shocks at one wheel are not transmitted to the other. Axles are forged I-beams as used in big-truck axles. Forged radius rods keep wheels aligned better. Result: big-truck durability with car-like ride.



FORD

FORD-BUILT
TRUCKS



MERCURY



How to take better care of your horse—3 ways!

For farm, ranch or pleasure horse—no liniment made can touch the all-round good job that Absorbine does for you. Used directly on swollen tendons and tender areas, it draws the soreness out. Used as a wash after a workout, Absorbine helps horses cool out and keep sound and fit.

Buy it as an astringent, conditioner and gentle antiseptic. The long-lasting bottle is still only \$2.50. Also available in gallon size.

ABSORBINE

W. F. Young, Inc., Montreal 19, P.Q.



BALE HAPPILY with smooth running



The famous Danish Twine	
"Heavy Duty Nine"	9,000 Ft.
"Regular Ten"	10,000 Ft.
"Thrifty Ten"	10,000 Ft.
"Long Twelve"	12,000 Ft.*

* WILL TIE OVER 660 BALES!

WIN A DREAMTRIP
TO DENMARK FOR TWO — GET ENTRY
BLANK FROM YOUR DEALER TO-DAY

"WESTFALIA" & "DOMO"

Separators and Milkers

- All rust proof
- Closet skimmers
- Outstanding beauty and performance
- Built to last a lifetime

WESTFALIA MILKERS

Fastest and safest Milker, outperforms all other makes.
See Your Dealer or Write
C. A. DeFehr & Sons
78 Princess St., 10970-8th St.,
Winnipeg, Man. Edmonton, Alta.
238 1st Ave. N., Saskatoon, Sask.

To cut manure disposal expenses, save plant food, try

Manure Pit Storage

REGULAR METHODS of handling solid manure result in heavy losses of plant food. Farmers ask the question, "How can we get around the labor problems involved in manure handling?" T. H. Lane, of the Soil Science Department, OAC, says that liquid manure offers farmers real opportunities to reduce labor costs and fertilizer losses.

Manure pits save the fertility value of the manure. Manure pits are actually deep storage tanks in which partial breakdown of the manure occurs. Because the surface area is small compared to the total volume of the pit, the action of air and sunlight is excluded. There may be an odor problem when the liquid manure is being removed from the pit. However, the odor problem during the storage period is considerably reduced due to the thick layer of solid material that forms on the surface.

Is liquid manure worth the expense of pit storage to conserve fertility? Is it worth using on crop land or should you substitute fertilizers

which are easier to handle and apply as a source of plant food? The Saskatchewan Department of Agriculture attempts to answer some of these questions.

On the basis of the current values of nitrogen, phosphate and potash as fertilizer, 1,000 gallons of liquid pig manure from a manure pit are



Liquid manure is suited to mechanical handling methods that reduce cost

Changes Coming to the Swine Industry

THERE WILL be more commercial swine units of 75-100 sows but the small producer with 10 or less sows will still continue to be a factor in Canadian swine production, according to Dr. J. P. Bowland, professor of animal nutrition at the University of Alberta, Edmonton, Alta.

The smaller number of sows can be an efficient secondary operation that takes no extra labor and very little overhead. However, 10 to 20 sows is a unit of an uneconomic size because it requires additional labor and equipment but is not large enough to pay for this. The optimum weaner operation will probably be 150 - 200 sows and the optimum market pig unit will range in size from 3,000 to 5,000 pigs per year.

Swine rations will become more and more complex in an effort to reduce the cost of feed, which represents 65 to 80 per cent of the total cost of hog production. Hog feeds will be mixed by the feed industry rather than on the farm. Rations will be designed specifically for the conditions of every individual enterprise. The specialist producer will make use of advanced consultant services such as those available from the feed manufacturer, from the elite purebred or hybrid pig breeder, and from government services or future independent consultant services.

An important factor in swine profits is the number of pigs produced per year per sow on inventory. Dr. Bowland suggests that producers should think in terms of 1½ litters totaling 15 pigs marketed per year per sow on inventory.

The importance of disease control will lead to techniques such as the SPF program or to herd improve-

ment policies that include disease control such as those being practiced in some provinces now. Consulting veterinarians may become responsible for the health control of major herds.

Dr. Bowland also foresees greater investment per pig in buildings. The shortage of competent labor will force greater building and equipment overhead. Swine buildings will become obsolete every 10 years and swine equipment every 3 to 5 years, so that specialized swine producers will have to pay for these buildings over shorter periods.

Swine production in Canada will increase more rapidly than the increase in human population. The industry will have to remain competitive with beef and broiler production as well as with other competitive protein products. V

Management Important in Swine

SWINE PRODUCERS are building larger operations. This is done to take advantages of the "efficiency" so often claimed to go with increase in size of operation. This may be true but increase in size does not assure more success or more profit. There is no substitute for good management. Extending and enlarging a well-managed, successful small operation will be successful and profitable providing this management continues. But as the unit increases, more intensified and better management is needed.

J. W. Underwood, livestock specialist at the Western Ontario Agricultural school, points out some pitfalls to be avoided. They are:

- Increasing size, buildings, and providing better nutrition, but not

worth at least \$6. Similarly, 1,000 gallons of liquid poultry manure may be worth over \$10. The cost of installing a manure pit can be more than paid for by the fertility value of the manure that is saved, provided the manure is used in a cropping program.

In a liquid system manure is collected in a large tank or in gutters under a slatted floor. Once a month, the tank is cleaned. Bedding cannot be used.

Most manure tanks are made of reinforced concrete. The tank should be large enough to hold all the manure produced during a 6- to 7-week period. A daily storage capacity of 1½ gallons per animal is adequate providing no flushing water is used for hosing down the pen floors. On a farm with 100 swine, about 150 gallons of manure is produced each day. If the tank is to be cleaned once every 6 weeks, its total capacity must be nearly 6,000 gallons.

Since considerable knowledge of concreting is needed to build a large tank, it is advisable to employ a contractor to do the work. The liquid manure tank can be located under the floor of the barn. If it is placed outside, it should be covered with 3 feet of soil to avoid freezing problems during winter months. V

realizing the greater need for sanitation and disease control.

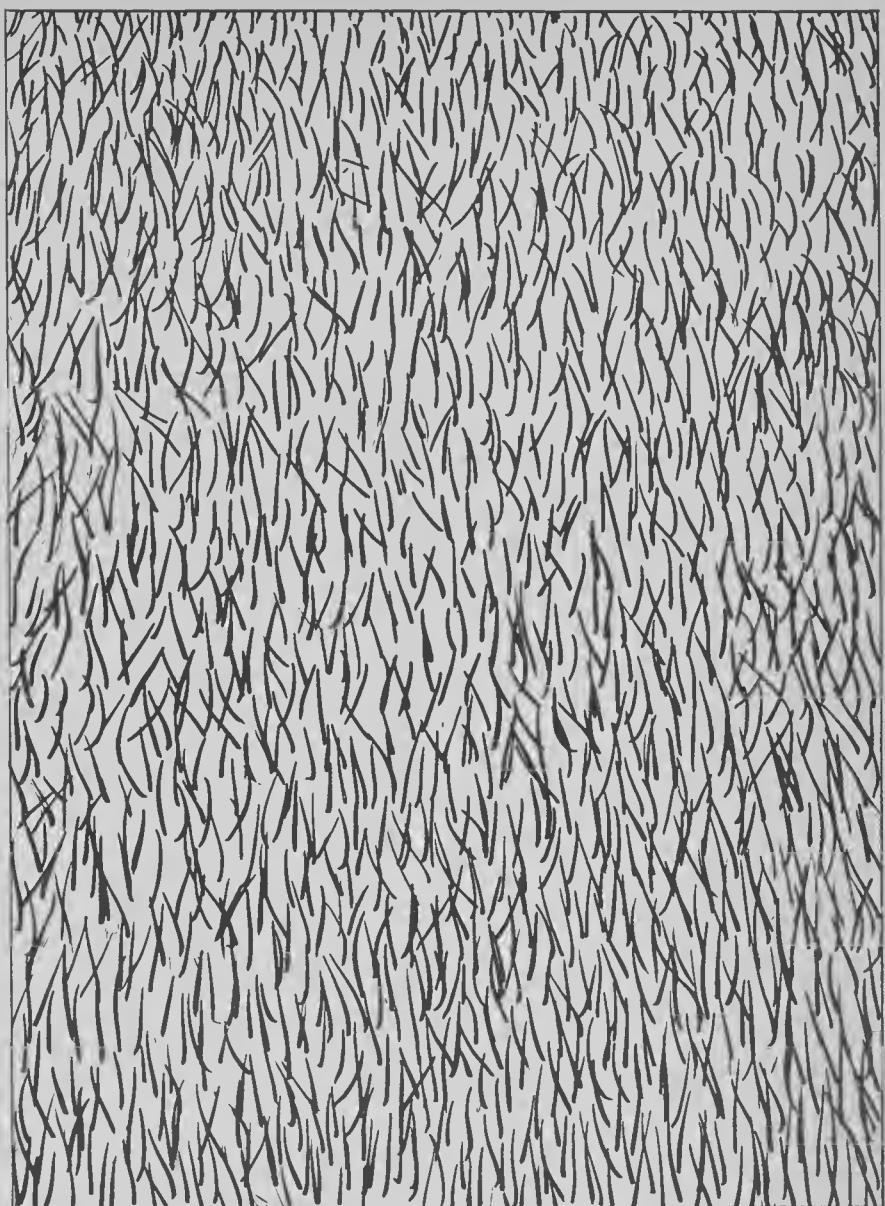
- Increasing mechanization to decrease labor, and then spending less time with your animals.
- Providing near perfect buildings and filling them with cut-rate quality stock.
- Keeping records but not using them. V

Oat Pasture Will Finish Steers

FINISH BIG steers to 76 per cent Good and Choice on oat pasture.

According to Dr. S. E. Beacom of the Canada Experimental Farm at Melfort, Sask., 600- to 700-lb. steers can be finished to slaughter grades on oat pasture. In a trial at Melfort, 72 steers were finished on a combination of oat pasture and grass legume pasture. The steers gained 440 lb. during the grazing season. Gains on oats were nearly 3 lb. per day. When the steers were marketed, 17 graded Choice, 38 Good and 17 Standard.

Oat pastures complement the slump in grass legume production that occurs in August. Dr. Beacom recommends sowing oats at the normal time in May and during the period from July 5 to July 20. The pasture requirement for 50 head of steers under a program such as this would be 50 acres of grass-legume pasture, and 40 acres of early seeded oats divided into 3 or 4 fields. You may not need all of it during the first grazing and probably can regraze some. Therefore, in a good season, some of this would be harvested for grain. You would also require 30 acres of oats seeded during the period of July 5 to July 20 for later pastures. V



Just 4 wild oats per square foot = 174,240 wild oats per acre!

What appears to be only a light infestation may cost you more than you can afford.

Here's why:

Before you shrug off just a "few" wild oats in your newly planted crop, consider this:

There are 43,560 square feet in an acre. Four wild oats per square foot times 43,560 equals 174,240 wild oat plants per acre. Easy to overlook in your young crop. But think of the valuable moisture and plant food that 174,240 wild oat plants will drain away from each acre.

In wheat and barley, field tests

show that four wild oats per square foot can reduce yields by at least 6 bushels an acre. That's 240 bushels lost from each 40 acres. Can you really afford that big a loss?

The modern answer is farm-proven Carbyne, the wild oat killer that kills wild oats where they appear. It has been used successfully on more than 1½ million acres. One spraying of Carbyne at the right time kills wild oats in your growing crops.

This is the simplest, most economical method of wild oat control known. In fact, you can expect to get back \$3 in extra yields for every \$1 you invest in Carbyne.

You're in control of the wild oat situation with Carbyne. And, Carbyne lowers cultivation costs, cuts

down future wild oat infestations and reduces dockage at the elevator.

Don't miss your chance to save your crop profits from yield-robbing wild oats. Carbyne is recommended and approved for use on Spring wheat, durum wheat, barley, sugar beets, flax, peas, mustard, rape and sunflower.

Free Carbyne Folder

See your farm chemical supplier today for your free copy of the new, full-color Carbyne folder. It tells you how to judge the seriousness of a wild oat problem . . . the 3 easy steps to kill wild oats . . . how to calibrate your sprayer . . . how to mix Carbyne . . . when to spray Carbyne for best results.

TEAR OUT AND MAIL COUPON TODAY!

Spencer Carbyne
Box 34
St. James Postal Station
St. James 12, Manitoba

YES! I would like to have the latest up-to-date facts about how to kill wild oats with the modern, low-cost way with Carbyne. Please rush me a free copy of your new, full-color Carbyne folder.

Name _____

Address _____

Town _____

Province _____

CG



NOW also available in new 1-gallon size that treats 4¾ acres!

EXPORT
PLAIN OR FILTER TIP
CIGARETTES
New FILTER KING 25s

Healing Substance In Preparation H Shrinks Piles

Exclusive Healing Substance Proven To Shrink Hemorrhoids And Repair Damaged Tissue.

A renowned research institute has found a unique healing substance with the ability to shrink hemorrhoids painlessly. It relieves itching and discomfort in minutes and speeds up healing of the injured, inflamed tissue.

In case after case, while gently relieving pain, actual reduction (shrinkage) took place.

Most important of all—results were so thorough that this improvement was maintained over a period of many months.

This was accomplished with a new healing substance (Bio-Dyne) which quickly helps heal injured cells and stimulates growth of new tissue.

Now Bio-Dyne is offered in ointment and suppository form called Preparation H. Ask for it at all drug stores—satisfaction or your money refunded.

VALUABLE! NEW!



72 PAGE
BOOKLET ON
ANIMAL AND
POULTRY HEALTH

Concise booklet packed with up-to-date information on animal and poultry diseases. Describes latest scientific aids for the farmer and breeder. Special coupon enclosed saves you 10% on your first purchase of VioBIN veterinary products through your local dealer.

Send today for your copy of this informative health guide.

VioBIN (Canada) Limited, St. Thomas, Ontario.

VioBIN (Canada) Limited
St. Thomas, Ontario, Dept. No. C.G.4
Please send me a copy of your new animal and poultry health booklet. I enclose 25¢ to cover postage and handling.

Name.....
Address.....

Soils and Crops

Soil Testing Comes of Age

How much is it worth to find out what your land needs? Two provinces say this information is worth a reasonable fee



[Man. Dept. of Agric. photo]

Soil samples are accurately weighed for each test that determines plant nutrient content

-A staff report

fact that interpretation of results must be done by a busy staff.

The reasoning behind the proposed combined services building is that a cropping problem might not be caused by a lack of plant food, but by the presence of some other factor such as soil or crop disease. A combined laboratory could investigate the problem from all angles. The staff could also be used more efficiently than if concentrated on a single task.

Some agrologists are against the idea on at least two counts: For one thing, it would mean removing soil testing from the benefits now enjoyed by its close contact with the University's Soil Science Department. Because soil fertility is basic to all crop production, a single, well-equipped laboratory devoted solely to this purpose, would be much more effective.

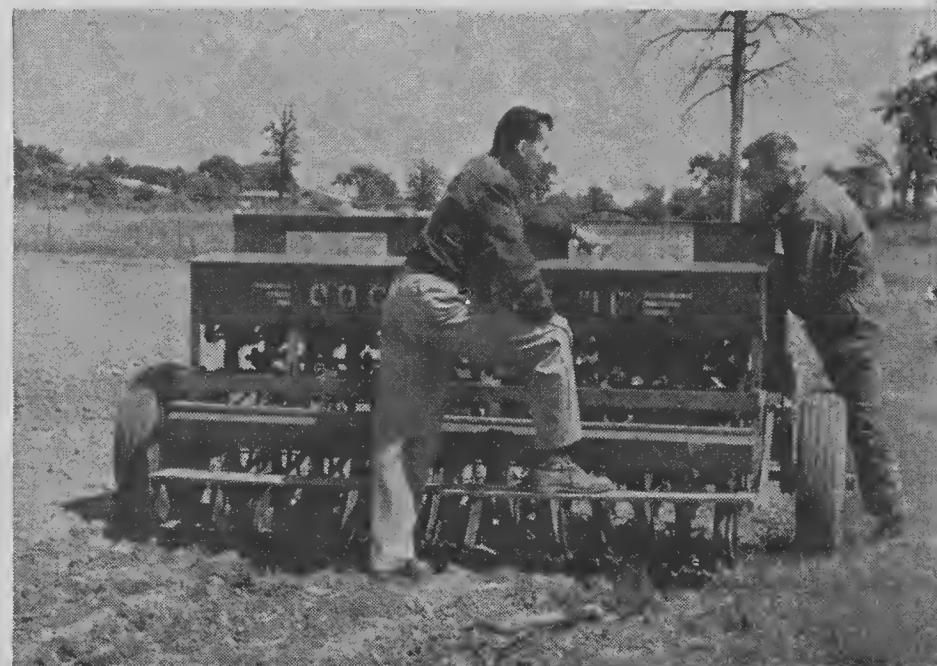
Said one soil specialist, "A single bullet carries farther than a handful of shotgun pellets. What they're talking about sounds like a glorious agricultural Pentagon."

But others feel an all-inclusive laboratory would be a good thing.

British Columbia

In British Columbia, where the hill people are wont to roll rocks down into the valleys and lowlanders keep their guns trained on the hills, all is peace on the soil testing front. The reason is the introduction of completely new provincial soil testing procedures which have gained the support of both University and Canada Department of Agriculture researchers. Old procedures in use by the provincial soil testing labora-

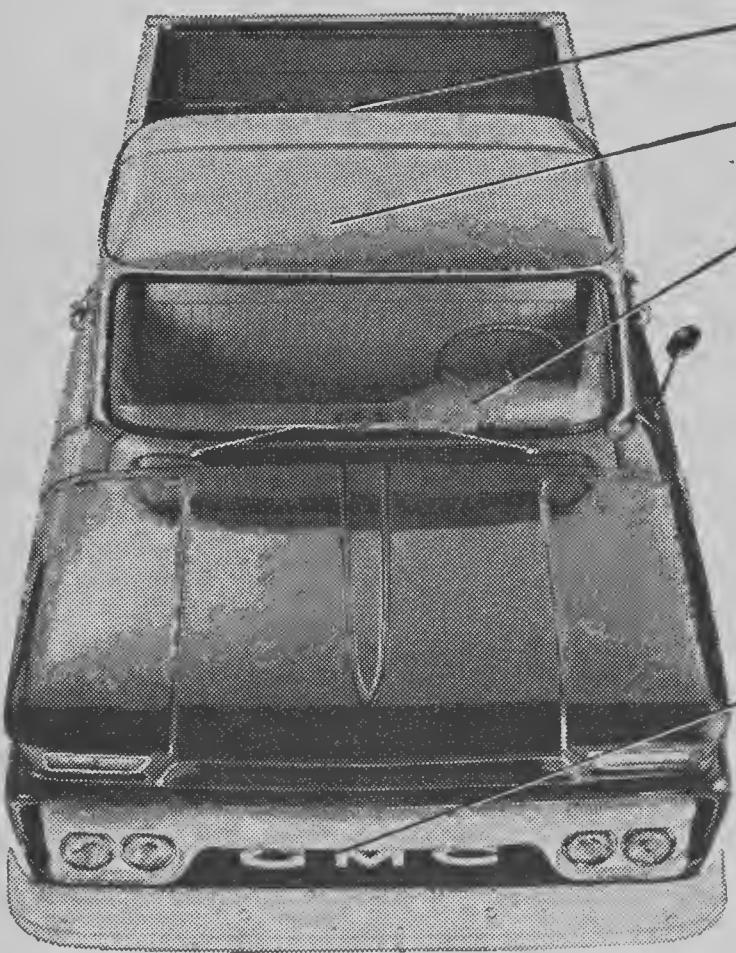
(Please turn to page 44)



Because fertilizer recommendations which are based on a soil test will be exact, there is no waste of fertilizer and all crops get maximum nutrients

From top to bottom, GMC trucks have what it takes to deliver the goods!

See for yourself!



C920 PICKUP

The floor stays nice and quiet. None of that annoying "drumming." Snug-fitting tailgate is sand-tight.

Two walls of steel and a thick layer of insulation protect you during hot days, cold days and noisy days.

Some pickups have a nest of wires behind the instrument panel. GMC replaces those wires with a printed circuit.

Four headlamps. Most other pickups have just two.

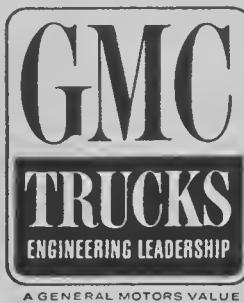
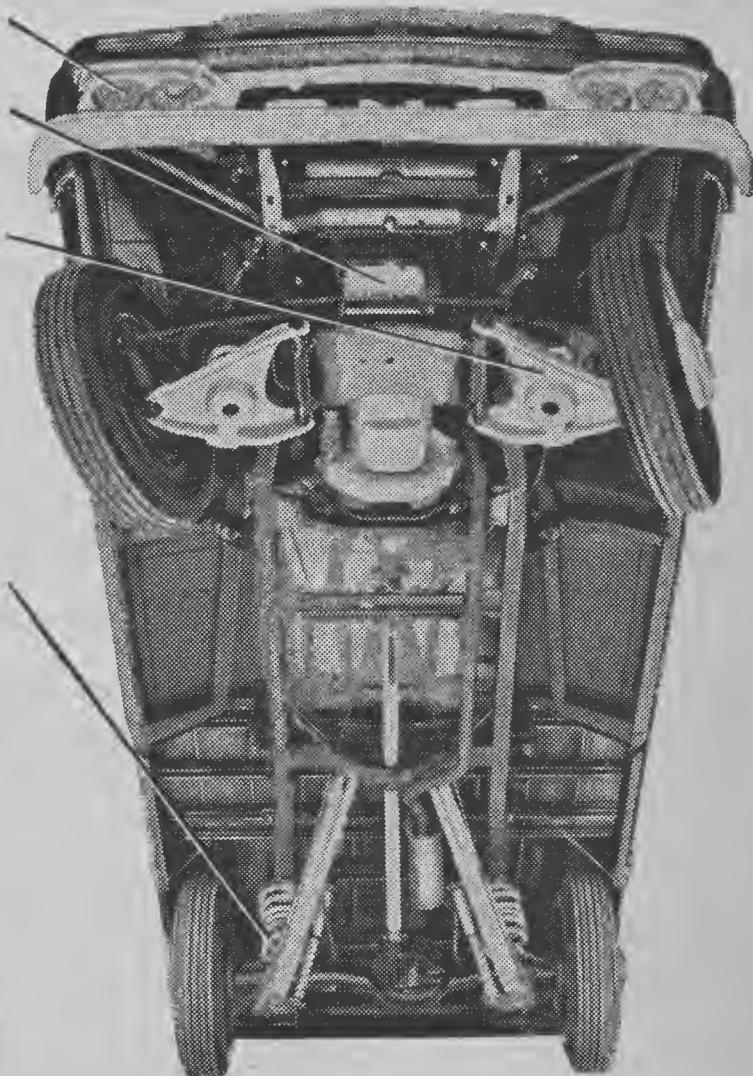
The in-line engine works and works, yet requires little attention. Why? Because of its seven-main-bearing crank-shaft, its accessible full-flow oil filter.

Independent Front Suspension soaks up shock from the road. Saves wear on the truck, the load and you.

These letters don't cause a smoother ride. But they do stand for a comforting thing. Your truck is backed by a manufacturer whose knowledge of commercial vehicles is second-to-none.

Coil spring rear suspension makes light work of heavy loads. All-rubber-bushed control arms need no maintenance.

Wherever you look in GMC trucks, you'll find more proof of GMC Engineering Leadership. And that's true for the whole wide range of Light-Duty models in the 1965 GMCS. Ask your GMC dealer to show you, soon!



Get GMC's Engineering Leadership working for you NOW!

IT'S HERE! ROTARY POWER with HYDRAULICS



NEW Char-Lynn® Hydraulic ORBIT® MOTOR Opens new era of Mechanization on the Farm

Now farmers everywhere can operate almost all of their equipment with a compact, powerful and easy-to-handle Hydraulic Motor. The new Char-Lynn Orbit Motor attaches right to your tractor hydraulic system and develops smooth rotary power at a flick of your hand. It can be moved from one piece of equipment to another in seconds.

YOU GET

Full Starting Torque • Choice of Rotation—Either Direction • Instant Start—Instant Forward—Instant Reverse • Range of Speeds —0-800 R.P.M. • Can be stalled without damage • One motor can operate several implements • 7 Models to choose from

IT WILL OPERATE THESE AND MANY MORE:



Straw Chopper



Diggers



Spreaders



Mowers



Conveyors



Feeder and
Unloader Wagons



Elevators



Utility Mixer



Feed Grinders



Augers

CAN REPLACE THESE!

P. T. O. Shafts
Electric Motors
Gas Engines
Belts — Chains — Guards
Cumbersome Motor Mounts

CAN END THESE WORRIES!

Cold Weather Starting
Motor Burn-outs
P. T. O. Alignment Problems
Explosions or Fires
(caused by exhaust — sparks — heat)
Throttle Adjustments or Power Failure

EASY TO USE Flexible easy-to-handle hoses. Plus — QUICK SNAP on mounting make motor change-over as simple as plugging into a wall outlet.

SEE YOUR CHAR-LYNN DEALER TODAY FOR COMPLETE DETAILS OR SEND IN COUPON BELOW



Char-Lynn
COMPANY

HYDRAULIC HORSEPOWER PRODUCTS
MINNEAPOLIS, MINNESOTA

Char-Lynn Co.
2843 - 26th Ave. So., Minneapolis, Minn.

I am interested in operating a _____ with the ORBIT MOTOR.

I have the following type tractor:

Make _____
Model _____
Name _____
Address _____

Soils and Crops

tory at Victoria were often condemned by research men. The new accord ensures the co-operation necessary to maintain a high quality testing service.

The B.C. laboratory offers a regular soil test to show the amount of available phosphorus, potassium and calcium, whether the soil is acid or alkaline (as shown by the pH level) and the percentage of organic matter present. This is the basic test for calculating fertilizer needs. For greenhouse soils, a test for nitrate nitrogen is included.

The fee charged for an individual sample is \$3. Samples sent in groups of five or more are assessed at \$2 apiece. When samples are forwarded to the laboratory through organized farm organizations, or companies serving the agricultural industry, the charge per sample is 25 per cent less than the group price, or \$1.50.

Another service provided is a conductivity and pH test, which shows the pH of the soil and the amount of soluble salts. The charge is \$1 a sample. This test is needed for some problem soils in the B.C. Interior, and often in greenhouse soils where toxic amounts of salts build up because of poor drainage, or excessive fertilizer application. Also offered here (and in other provinces too) is an irrigation water quality test to see if the water is safe to use for irrigation. This test gives the sodium, calcium and magnesium content, as well as conductivity and pH. For this you pay \$3 per sample. For \$5 a sample, the laboratory will run a special test for some element not included in the regular test.

The trend to increased fees might be unpopular with some people, but from the standpoint of the soil analyst it is a big advantage. Most feel the charges enable them to justify the expense of the extra help and first class equipment needed to provide a quality service.

Commenting on this new testing policy of the B.C. and Manitoba departments, W. H. Horner, Deputy Minister of Agriculture for Sas-

katchewan had this to say, "I would think that if soil analysis information is worth anything at all to a farmer it is worth paying that much for."

Soil testing is increasing in Ontario. From April 1964 to mid-January 1965, some 60,000 soil samples have been received by the Department of Soil Science, Ontario Agricultural College. This is about 10,000 more samples than in the same period 1 year ago. Five years ago the laboratory was testing about 30,000 samples per year.

This increase in soil testing indicates the changing pattern in agriculture. While fewer farmers are working the land, more are using all available services as aids in producing profitable crops.

Computer

T. J. Heeg, of the Department of Soil Science, OAC, says that starting on July 1, 1964, soil test data have been processed by computing machines which greatly increase the efficiency of soil test reporting. However, the computer demands accurate information. Information sheets accompanying soil samples must be properly completed. This is now more important than ever. Essential information includes the crop to be grown, manure to be applied, and residues and sod to be plowed down. If a hay or pasture is the crop to be grown or to be plowed down for the next crop the legume content must be stated. All of these factors seriously affect the fertilizer and lime requirements.

The computer is also capable of analyzing the soil test data in a manner never before possible. In the period of July 1 to November 30, 1964, 21,123 samples were processed. Of these samples 44.3 per cent involved small grains seeded alone or with a hay pasture mixture; 73.7 per cent involved small grains or hay pasture. Corn growers accounted for 13.7 per cent and wheat 13.2 per cent.

In the analysis of crops, sod crops with 50 per cent or more

(Please turn to page 46)



Soil sampling with a soil tube. Mix samples from all parts of the field and take out enough to fill the sample container

[Man. Dept. of Agric. photo]



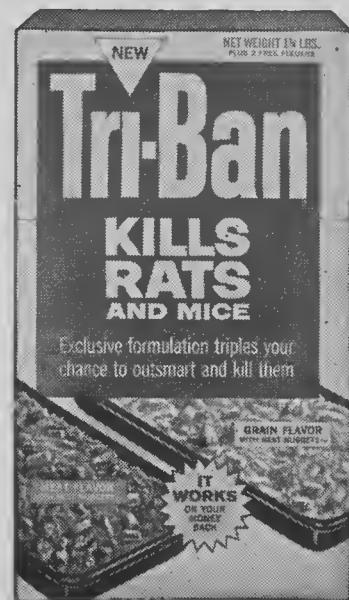
This rat costs you \$40 a year!

New TRI-BAN kills all your rats or your money back!

We mean all! When used as directed, this amazing new rat killer will wipe out every last one of these grain-stealing, disease-spreading creatures or you get your money back in full. How can we make this unconditional guarantee? Here's how:

- New Tri-Ban gives rats the two feed flavours they prefer: grain and meat.
- New Tri-Ban supplies "nest nuggets": carry-home bait for killing in the nest.
- New Tri-Ban comes fresh . . . stays fresh. Hermetically sealed with special pouring spouts and feeder trays.

Sure Tri-Ban costs more—but if it doesn't kill all your rats it won't cost you a cent!



Tri-Ban—the guaranteed rat killer from PFIZER COMPANY LTD., Montreal, P.Q.

legumes were low in phosphorus in 23 per cent of the cases, but only 9 per cent were low in potassium. Corn samples were low in nitrogen in 46 per cent of the samples, 19 per cent were low in phosphorus, and 6 per cent were low in potassium. Besides being able to assess fertility pictures by crop for the entire province of Ontario, the computer can give this information by region or even country.

Thus the value of soil testing is extended, not only to the farmer, but to the research worker, extension personnel and the fertilizer industry. Computer analysis can be an aid in pin-pointing areas of deficiencies.

The accuracy of your soil test depends on your careful sampling of the soil. If the samples sent in do not represent the field, the soil test

cannot be expected to result in accurate fertilizer recommendations. Howard Henry, Soils and Crops Branch, Ontario Department of Agriculture, advises Ontario farmers to use the method outlined below.

Use a shovel or soil sampling tube. Tubes are available from agricultural representatives or fertilizer dealers. Avoid sampling where there have been piles of manure or other residues, strikeouts, dead furrows, or close to gravel roads. Before sampling, clear all trash from the surface of the soil. If a shovel is used, insert it to a depth of 10 to 12 inches. Discard the first shovelful of soil. Clean any loose material from the hole. Slice off a 1-inch layer of soil from the side of the hole. Trim off the bottom of the slice, retaining only the top 6 inches. If a soil sam-

pling tube is used, push it into the soil to a depth of about 9 inches. Move the tube carefully back and forth and then pull it from the soil with a straight-up motion. Trim off the core of soil in the tube, retaining only the top 6 inches.

Collect at least 15 cores from a 10-acre field, and proportionately more from larger fields, covering the whole area to be tested. Collect all cores in a clean pail or basket. Break up the lumps and mix all cores together thoroughly. Transfer the mixed soil to a waxed paper bag in a soil box, taking enough to fill the box. Soil sample boxes, waxed paper bags, and questionnaire forms may

be obtained from your agricultural representative. Do not dry the sample.

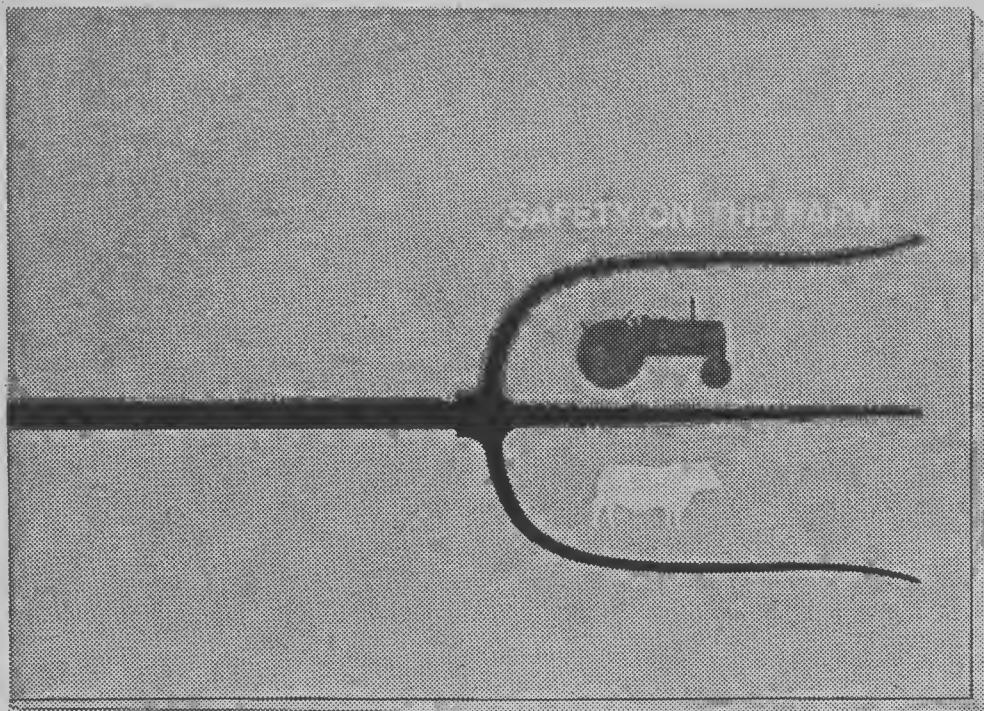
Write all the information required on the questionnaire form, and enclose it in the box with the sample. Place your name, address and sample number on each soil box. Use numbers only (1, 2, 3, etc.) to mark samples. Do not use other symbols such as 1 (a), 1 (c), etc. Keep a record of all samples so that you will know which sample came from each field when the soil test report is sent to you. Pack the samples together in one carton, and mail or express to Department of Soil Science, Ontario Agricultural College, Guelph, Ont.

Soil samples from land to be used for spring sown crops should be collected the previous fall. Fields to be used for fall sown crops should be sampled in the spring or early summer. If samples are very dry, moisten them with a few tablespoons of clean water immediately after sampling. Ship samples as soon as possible after they are taken.

It pays to use a soil test to guide fertilizer applications. How much? About \$6 per acre according to a summary of soil test reports in Manitoba. Dr. W. E. Janke, director of the Manitoba Provincial Soil Test Laboratory, told the 1964 Agronomists Conference that where wheat on fallow land was fertilized according to the need shown by the soil test, average returns over and above the cost of fertilizer were \$5.50 per acre. On stubble land, wheat, oats and barley fertilized according to soil test returned \$6.70 over and above the cost of fertilizer.

Soil testing will also save you money by telling you when you don't need fertilizer. John Murta of Graysville, Man., had already purchased 15 tons of high nitrogen fertilizer for his stubble land when his test results came back. He did not use the fertilizer and still obtained a 30-bu. crop of wheat. This is considered to be a high yield for wheat in a continuous cropping program. Mr. Murta also saved 2½ tons of 11-48-0 in his flax crop. This is what he had been applying but again the soil test indicated that it was not needed. ✓

The best farm is a safe farm



Read
'Safety on the Farm'—
a booklet from the bank
that helps your farm business grow!

Be certain your farm property is free of situations that lead to accidents. Often, you don't realize the existence of danger-spots until something happens. 'Safety on the Farm' points out frequent problem-

areas and offers many important safety tips. It's well worth your attention.

Today, pick up your copy of "Safety on the Farm" at your local Commerce Branch.

**CANADIAN IMPERIAL
BANK OF COMMERCE**

Over 1260 branches to serve you



Farmers in the four western provinces who want their soil tested can send their samples to:

MANITOBA
Prov. Soil Testing Laboratory
Dept. of Soil Science
University of Manitoba
Winnipeg.

SASKATCHEWAN
Soil Testing Laboratory
Dept. of Soil Science
University of Saskatchewan
Saskatoon.

ALBERTA
Soil Testing Laboratory
Dept. of Soil Science
University of Alberta
Edmonton.

BRITISH COLUMBIA
Soil Testing Laboratory
Field Crops Branch
B.C. Dept. of Agriculture
Victoria.

Information on sampling, and containers for shipping soil samples, will be provided by your local agricultural representative or district agriculturist.

NOW AT UGG WEEDONE 100

LOW VOLATILE
CONCENTRATE
FOR
HARD TO
KILL
WEEDS

**FREE
WEEDONE GUIDE**

A handy pocket size edition with helpful information and convenient pull-tab charts to assist you in the preparation of spraying formulas.

**TO GET YOUR
FREE COPY**

See your nearest U.G.G. agent or write to United Grain Growers Limited, Farm Supplies Department, Winnipeg, Regina, Saskatoon, Calgary or Edmonton.



New . . . specially formulated weed control chemical that works on Canada Thistle and Buckwheat! A low volatile formulation, Weedone 100 does not vaporize like standard esters; instead, it penetrates the tough waxy surface of even hard-to-kill weeds like Canada Thistle and Buckwheat, and is absorbed by the weed and translocated right to the roots! Weedone 100 can be used in hard or soft water and applied with good results under such adverse conditions as drought or cool weather.

**United
Grain
Growers**

ANOTHER "FARM-PROVEN" WEEDONE PRODUCT

NEW-SIZE FORDS

bring you a great new balance



ALL-NEW FORD SUPER DEXTA 3000

Spirited 46 HP* all-purpose tractor with heft and strength to handle tough jobs. Gasoline or diesel. Leads its class in transmission and PTO options . . . fits widely varying farming needs with precision. Rugged 2-3 plow power.

ALL-NEW FORD SUPER MAJOR 5000

Now, a big 65 HP*, all-purpose Ford diesel tractor. More than two-and-a-half tons of brawny workpower to handle biggest jobs on most farms. All-Ford in comfort and handling ease. Completely new 4-plow power.

FORD COMMANDER 6000

The world's most advanced 5-plow tractor is better than ever. Now 78 HP*. Gasoline or diesel models. Power shifting, power steering, and power braking for unrivaled operating ease. New strength in transmission, final drive and PTO.



all that separating area. It gives us more grain and cleaner grain in the bin, which pleases the people we work for, naturally. Another thing we really like is the new variable speed control that we get on our Gleaners this year. We set our cylinder speed according to crop condition, heavy or light—wet or dry. And of course that means we can start earlier and work later, too. Mom, if Ag School wasn't right on the top of my list, I wouldn't mind a job selling Gleaners for Mr. Fernwood, our

Allis-Chalmers dealer. Anyway, if you see Jean, tell her to make the next letter care of General Delivery, Moundsboro—OK? And tell Jimmy to be patient and keep on growing, because summer after next he'll be a Gleaner pilot himself, and come custom harvesting with Dad, Burt and me. Enjoyed his letter about Nellie and her puppies. LOVE—BILL.

P.S. The old-timer said "combine"—most folks say "Gleaner!"



When you're a farmer and your own boss...



your Imperial Esso agent can help you get more for what you do because he's part of something bigger...Imperial Oil

Today, you must be men of many parts. Production manager, purchasing agent, maintenance engineer. With a big capital investment in machinery and equipment, you're three times as concerned with efficiency. Because efficiency means profits. That's why if you operate diesel equipment you should use Esso Diesel Fuel for greater efficiency. Esso Diesel Fuel is adjusted regionally and seasonally to ensure top performance all year round. It's refinery controlled to ensure correct Cetane Number and volatility in *any* area in *any* season. Sulphur content is one-quarter of the standard for clean, reliable operation. But that's only part of the story. The point is, you'll have a fuel you can depend on at all times. Next time you need diesel fuel, see your Imperial Esso agent.



Letters

Questions Pension Plan

It seems to me few people are aware of what the new Canada Pension Plan is going to cost us. When you stop to figure it out, how many Canadians can afford it? How many farmers, for instance, are now making as much as they will be getting with the basic \$75 a month? That's \$900 a year. Does the average Canadian farmer make \$900 annually for each member of his family? For a family of 5 (3 children) that would be \$4,500 a year. Many farmers make \$2,500 or less. Can they afford to pay 3.6 per cent of that in order to get an even larger pension cheque when they eat less, wear less and spend less?

And if the father doesn't live to collect it, do the children get anything out of it? The parent's pension may well cost junior his education!

A.S., Orillia, Ont.

Pony Ride



Lady is a gentle little pony owned by Terry Sanders. The neighbor children all want to ride on her. Pictured are Sharon and Julie Fletcher.

Mrs. H. SANDERS,
Nelson, B.C.

Likes Guide

This is a wonderful paper with its hints, stories, Rural Route letters—well, just everything. We have been readers for years.

Mrs. J.F.,
Frankford, Ont.

Ship Identified

I have subscribed to Country Guide since 1929 and always look forward to it. The cover picture on the February issue bothers me. The name Georgetown shows on the lifeboat shown in it. However, on page 5, you say that the potatoes are being loaded on the "S.S. Magister." I have always understood that lifeboats and rafts, etc., on a ship carry the same name as the ship.

O.W., Moose Jaw, Sask.

EDITOR'S NOTE: The name Georgetown is the name of the Port of Register. Below the lettering Georgetown is C.I. which stands for the Cayman Islands. The three Cayman Islands are a dependency of Ja-

maica. In the past, the Cayman Islands have been noted for the export of turtle shells and sharkskins. The far side of the lifeboat bears the legend S.S. Magister.

No Discrimination

In your article in the January issue of Country Guide, "The Whites Are Moving Up," you record in your reference to Rodney James that "when he asked to be let into the Federal-Provincial performance test scheme and was told if the Charolais is still here in 10 years from now we'll let you in," Rod decided to set up a bull testing station of his own."

I can assure you that no person connected with the performance testing of beef cattle program in Alberta made any such statement, nor have I in attending the national meetings where this program has been designed heard anyone else make such statement.

The plain truth of the matter is that the official Federal-Provincial program, at the outset, was based on a program of testing purebred cattle. This did not prevent a province from carrying on a program of testing in grade herds if they so wished. The Federal responsibility was largely established as printing of forms, processing of data and reporting test results. The Federal people have not reported test results on commercial cattle and it was never my understanding that there was any agreement that they should do so.

The original Alberta program drafted in 1959 confined the program to breeds registered in the Canadian National Livestock Records. This was amended in 1961 to accommodate Charolais, to include any breed registered under the Canada Pedigree Act. It was also amended to require only that the calves be registerable.

Also in 1961 it was agreed that the department would supervise the weights for members of the Alberta Beef Cattle Performance Association upon request. This in effect provided a supervised service for any Charolais breeder who was prepared to join the A.B.C.P.A. The 1961 Alberta committee meeting also recommended representation by the A.B.C.P.A. on the committee. This was approved by the department and that association has been represented since that time.

Your method of reporting would indicate that the people responsible for these programs have discriminated against the Charolais breed. There has been no such discrimination at any level that I know of except a requirement to assure good faith on the part of a breed group and to avoid spending public funds on servicing every individual or splinter group that proposed a new cross or breed.

W. H. T. MEAD,
Livestock Commissioner,
Alberta.



A cosmetic for wood?



Certainly, Rez wood finishes do for wood what cosmetics do for women. Bring out natural beauty. Add a glowing, cared-for look. The soft lustre of wall paneling and gleaming furniture tells you at a glance that this living room...this home...is meant to be *lived* in. To give your home an inviting look of luxury—start with wood. Then take your pick of the twelve beautiful Rez decorator colors—and add romance, warmth and beauty.

Rez
WOOD FINISHES



For an imaginative touch of color indoors or out—new Rez Match 'n Accent Colors, made especially to harmonize with and complement Rez Wood Finishes.
MONSANTO CANADA LIMITED • Montreal • Toronto • Vancouver



THE KNOTTER THAT DOESN'T MISS

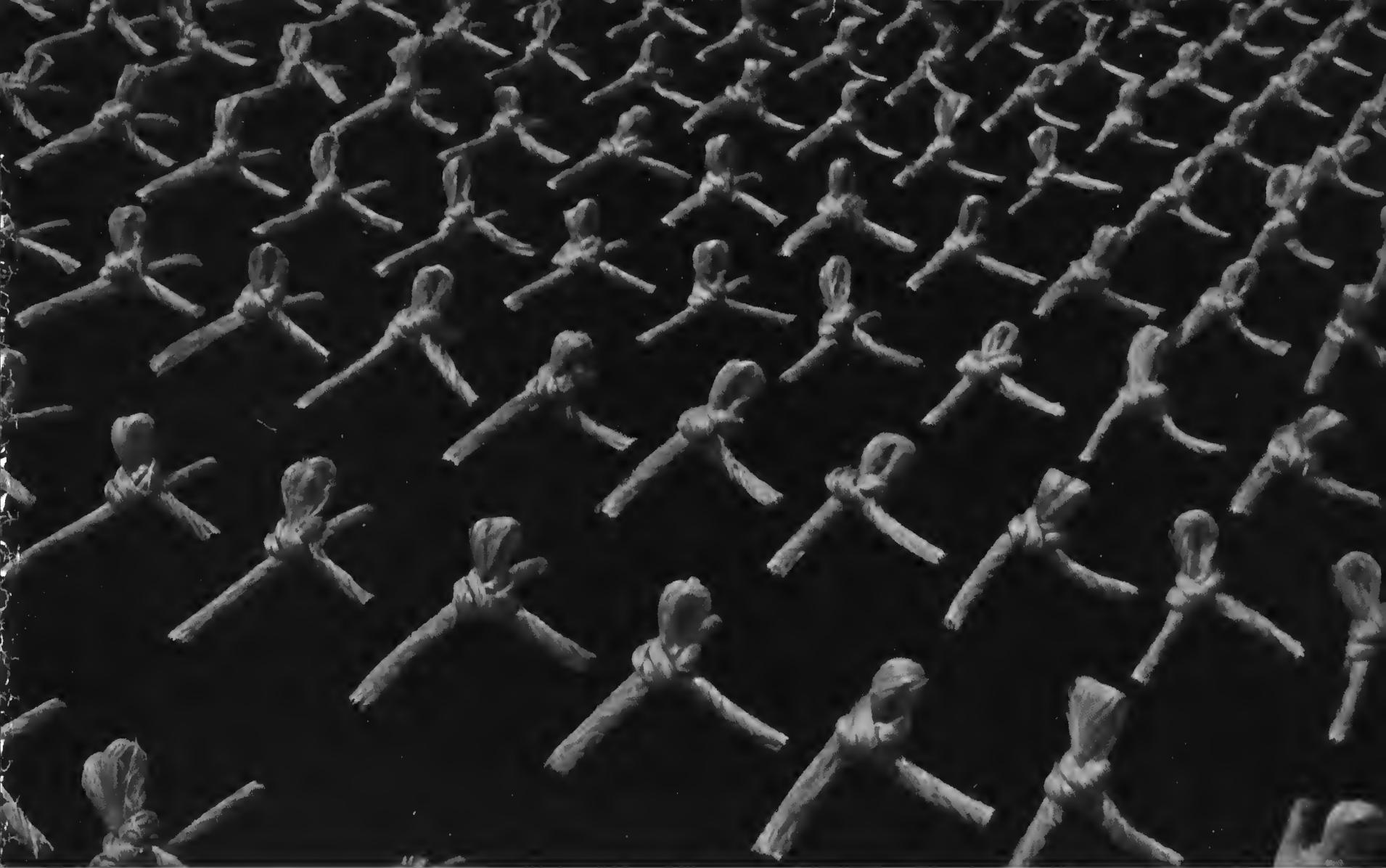
ties exclusive double-diameter knots

... it's the heart of



Payments tailored
to your income.

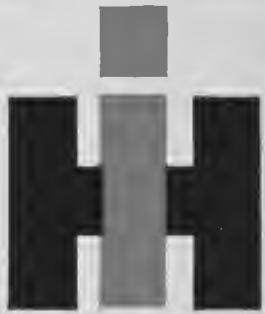
INTERNATIONAL HARVESTER COMPANY OF CANADA, LIMITED, HAMILTON, CANADA
Manufacturers of Farm Equipment • Motor Trucks • Construction and Industrial Equipment • Baler and Binder Twine



Record-breaking performance on thousands of farms last year proved the matchless accuracy and stamina of the new IH knoter. All three IH balers for 1965 have *the knoter that doesn't miss*—as standard equipment. This year team up with a proved champion—an IH 37, 47 or 57—which ever suits your needs and purse the best. Regardless of model, you'll get that rugged reliability that removes the

stop signs from tight baling schedules . . . performance that wins against the weather . . . features that give command of every baling job and every crop condition. Your IH dealer is the man to see. He offers all three all-proved, capacity-champions for you to choose from.

McCORMICK-INTERNATIONAL 37 • 47 • 57



the baler that outbales them all!





Guaranteed Fail-Proof Baking Results with Five Roses Flour ... the Flour of the Golden West!

Only when a flour has the superb baking qualities of Five Roses can such a positive guarantee be made. Five Roses' quality begins with the finest wheat in the world, the wheat from Canada's Golden West . . . wheat that is skilfully milled, and controlled at every step of the milling process. The resulting flour is then bake-tested to ensure that

it meets the exacting standards set by Five Roses. You'll notice this famous Five Roses quality in the fine, even texture of your bread. You'll see it in the tender flakiness of your pastries, the lightness of your cakes. These are the qualities you get from a truly fine flour — the very finest there is: Five Roses Flour, The Flour Of The Golden West.



CINNAMON NUT ROLLS a tested favourite from the Five Roses Kitchens

3 cups Five Roses Pre-sifted Flour	½ cup sugar ½ cup milk	1 teaspoon cinnamon ¼ cup melted butter
½ teaspoon salt	2 eggs, beaten	½ cup brown sugar
3½ teaspoons baking powder	½ cup melted butter ½ cup sugar	½ cup chopped nuts ¼ cup melted butter

Stir Five Roses Flour, salt, baking powder and sugar together. Combine milk, eggs and ½ cup melted butter; add to dry ingredients and mix well. Place on lightly floured board and knead lightly 10 times. Roll into a rectangular shape, ¼ inch thick. Mix ½ cup sugar, cinnamon and ¼ cup melted butter; spread over dough.

Roll dough as for jelly roll, seal edges and cut into ½ inch slices. Combine remaining three ingredients (brown sugar, nuts, ¼ cup melted butter) and sprinkle lightly over bottoms of greased muffin pans. Arrange slices, cut side down over this mixture. Bake in a moderate oven (375°F.) 25 — 30 minutes. Turn pans upside down on cooling rack and lift off rolls. Serve hot. Note: Rolls may be stored in pans in refrigerator overnight and baked in the morning. Yield: 16 rolls.

FIVE ROSES FLOUR
CANADA'S MOST RESPECTED NAME IN BAKING

Letters

Likes Frankness

I wish to congratulate you on publishing the letter about FAME, also your reply on the editorial page. If all farm papers were as frank and open, and published both sides of farm questions, we would all be better off.

Here in B.C. we have been in trouble for many years because the farmers put their money in city businesses.

Today, as things are, no one group or person may take the Milk Industry Act to the Supreme Court at Ottawa without putting up money in the amount of \$3 million. What individual farmer or farm group can afford to raise such a sum? Thus we are compelled to accept the Milk Industry Act without the privilege of proving it is within the rights of the B.N.A. Act in the highest court.

G.E.W.,
Sardis, B.C.

Too Much Emotion

Like so much concerning FAME over the past few years, the letter of M.B. of Stouffville, Ont., in your February issue, is very emotional and not very reasonable. This is one of the main reasons why I did not purchase any FAME "debentures" or shares. Being a member and supporter of COPACO at Barrie, Ont., the first and highly experienced farmers' meat packing co-operative in Ontario, I had become used to a very businesslike and enlightened approach to co-operative marketing.

We can serve up example after example of farm organizations which failed to carry out their intended purposes because the members accepted people to run their affairs who had no experience for the job—but nothing before on so grand a scale as FAME. All the more reason, surely, why FAME ought to have sought the best business brains farmer-money could buy. I doubt there is a FAME shareholder-farmer who would let some kid run his \$50,000 farm investment, yet FAME shareholders failed to demand successful business experience when setting up a multi-million dollar enterprise.

It is not the principle that is wrong—it is the way it was put into practice that caused the venture to fail, as, once again, so many have learned to their sorrow. If the shareholders continue to try to place the blame almost everywhere except where it belongs, it will be a long time before we will learn to try again.

GEORGE R. McLAUGHLIN,
Elmcroft Farms Ltd.,
Beaverton, Ont.

Help for Young Farmers

I do find your magazine very interesting and would like to commend you on the valuable information a young farmer can obtain through the articles you carry.

R.H., Cloverdale, B.C.

ONLY

Canadian General Electric gives you

CONDITIONED AIR

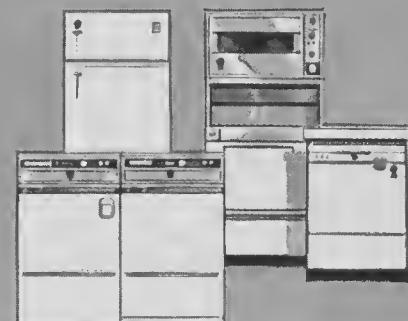
Food stays fresher... longer!



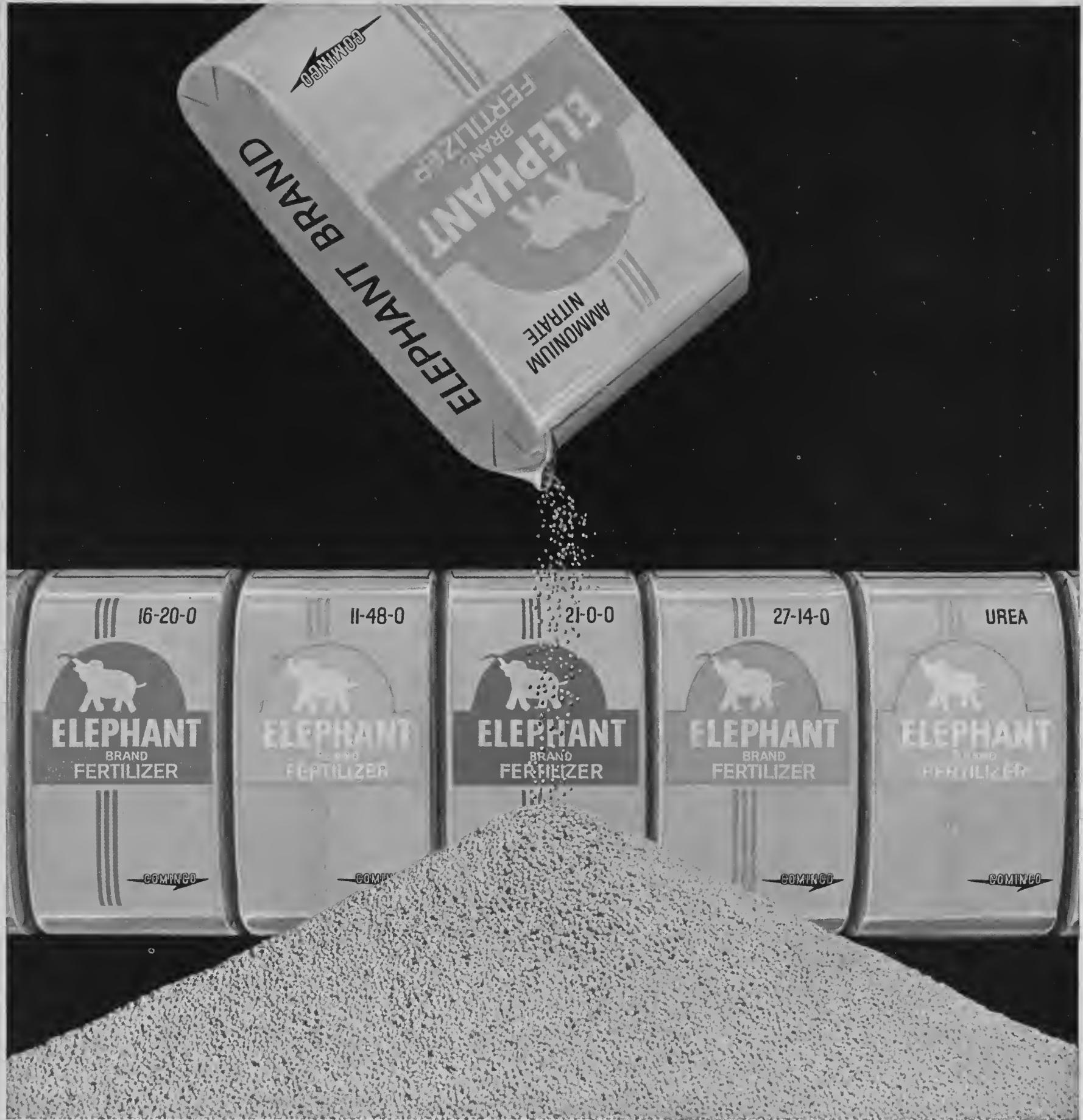
"TALISMAN" Model 148L51
"Conditioned Air" Frost-Guard Refrigerator



Look for this Talisman symbol. It identifies home appliances with the most technically advanced features... manufactured by Canadian General Electric for those who desire the very best.



CANADIAN GENERAL ELECTRIC



NOW IS THE TIME TO GET YOURS

It will pay you to have your Elephant Brand fertilizer on hand for seeding. It's a top quality product. High analysis for greater value—water-soluble for faster action—with uniform-sized pellets for easier application. Your nearest Elephant Brand dealer can supply you now. See him today for prompt delivery.

Elephant Brand high quality
FERTILIZERS

Produced by The Consolidated Mining and Smelting Company of Canada Limited

The most complete line of Fertilizers in the West

of power, weight and strength



ALL-NEW FORD MAJOR 4000

Brute-strong 55 HP* tractor with over two tons of lugging, lasting, all-purpose workpower. Gasoline or diesel in this most popular power class. Rugged double-reduction final drive. 3-4 plow strength and stamina.

ALL-NEW FORD DEXTA 2000

Husky, spunky 37 HP* all-purpose tractor fits profitably into most farming operations. Rugged new fuel-efficient gasoline or diesel engines. Tops its class for low-cost, long-lasting workpower. Complete 2-plow performance.

*Manufacturers' A.S.A.E. rating

1965's BIGGEST TRACTOR NEWS

... a totally new line of Fords. Heavier! Stronger! New-Size Fords! Your kind of tractor ... your size tractor.

BRILLIANT NEW ENGINES talk right back to toughest jobs with lugging, lasting power, get more work from a gallon of fuel. Diesel engines, built specifically for tractors, reach new highs in massive strength. And gasoline models are just as rugged.

NEW RANGE OF TRANSMISSIONS

... rugged 6-speed, dual-range 8-speed, or Ford's Select-O-Speed with 10 forward and 2 reverse gears.

WIDEST RANGE OF PTO CHOICES

... Transmission-driven; Live; Independent; and a combination of independent with ground-drive PTO, 540 and 1000 rpm.

ADVANCED INDEPENDENT HYDRAULICS ... with single-lever draft control plus position control and double-acting top link — for superior implement operation.

FORDS EXCEL IN COMFORT and convenience, as always. Steering — effortless. Hydraulics — better than ever. Controls — easy to use, precise in response.

Get the feel of New-Size power and performance. NOW, at your Ford Tractor and Equipment Dealer.

TRACTORS



EQUIPMENT

*Ford Tractor and Equipment
Sales Company of Canada Limited*

Cross-Country Steeple-Chase



[Guide photos
The course is a kaleidoscope of color and excitement

MORE AND MORE farm youngsters are becoming owners of saddle mares and are laying out riding courses with some jumps right on the farm. Not many of these youngsters have yet had the good fortune to be able to tackle an exciting steeplechase course, but such a project could well become one for a community.

A cross-country steeplechase was the highlight of the Ontario Pony Club Rally held near Guelph last July. "Pony" is something of a misnomer in this case, for most of the contestants had hunter-type horses ranging up to 16.2 hands. But the day was one to remember for all contestants. They were started every few minutes on an arduous 2-mile course which had 19 jumps and a slide.

Field Editor Peter Lewington followed the young hopefuls — some only 10 years of age — around the course with his camera.



Above:
A peaceful spot—over the bridge and alongside the stream

Top Left:
The judge checks the girth and bit and gives a final word of advice before the "Go" signal rings out

Bottom Left:
It's that-away through the cedar trees, while course stewards score the young riders on their horsemanship





Over the chicken-coop jump! One refusal would mean 20 penalty points; a second refusal would mean 40; a third—elimination



Some went down the slide one way, others took a swift, unpremeditated descent



One of the trademarks of old Ontario—the split rail fence—is called back into service



On the home stretch—2 miles, 20 obstacles, and a lot of experience later

NEW IMPROVED FREE ACCIDENT INSURANCE FOR FARMERS



Increased Coverage More Benefits Up to \$20,000 Protection

Statistics have proven that farming is a dangerous occupation. Recognizing this, ALBERTA PACIFIC GRAIN now provides compensation for minor injuries that hamper the farmer's ability to work for more than seven days. More serious injuries of course carry a bigger benefit. This wider base of benefits will provide greater coverage for an increased number of farmers.

A farmer automatically qualifies for this protection when he has delivered 500 bushels of grain to an ALBERTA PACIFIC elevator. There is no cost to the farmer customer.

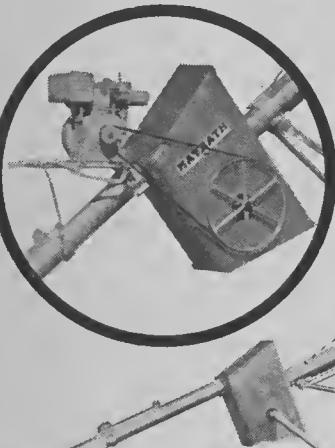
The new comprehensive accident insurance plan offered by ALBERTA PACIFIC is specifically designed to meet the farmer's needs. Prepared for ALBERTA PACIFIC by The Great-West Life Assurance Co., it provides more benefits than any other previous or existing policy, and it covers a wider range of disabilities and injuries.

Deliver your grain to the ALBERTA PACIFIC elevator in your area. You'll get the benefit of the best insurance coverage of its kind—without cost! See your local agent for complete details.

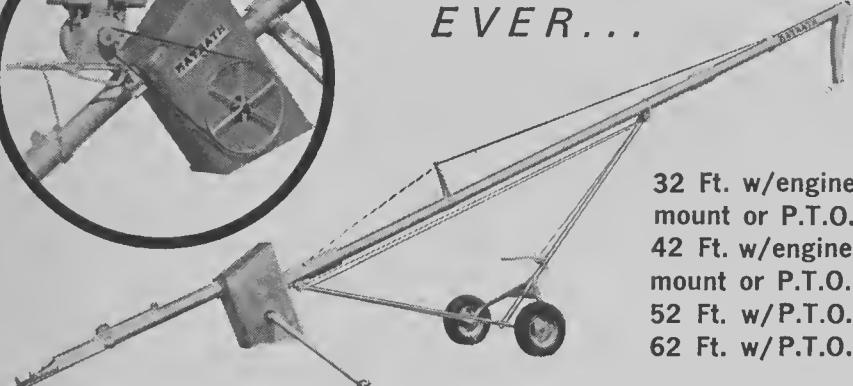
ALBERTA PACIFIC GRAIN LTD.

40 BU. PER MIN.—UP TO 42 FEET HIGH

NEW! MAYRATH COMPACT AUGERS



*Nothing to adjust
EVER...*



- ★ Drives from the middle instead of from one end
- ★ Changes from engine to P.T.O. in 2 minutes
- ★ Only one short belt
- ★ Only 4 moving parts
- ★ Handles everything — ground feed, flour, etc.
- ★ 4 to 5 feet extra reach
- ★ Nothing to assemble or adjust
- ★ Money back guarantee — 20 year life tests

ALSO NEW LINE OF SPRAYERS
BALE MOVERS and ELEVATORS

MAYRATH LTD.
CALGARY, REGINA and BRANDON (TRUCK and TRACTOR AT COOKSVILLE, ONT.)

Does your tractor have FINGER-TIP CONTROL
for mounted and trailing implements?

If not, you need an

M&W LIVE HYDRAULIC SYSTEM

Unless your tractor has a modern, live hydraulic system—its work range is limited by old-fashioned implements. Your dealer can install an M & W Live Hydraulic System specially engineered for your older tractor. It will enable you to work with the latest hydraulically controlled loaders, dozers, plows, discs and all other modern labor-saving implements—both mounted and trailing types.

M & W Live Hydraulic Systems provide instantaneous and continuous 2-way or 1-way hydraulic control—completely independent of transmission, clutch and P.T.O.

**Easily installed, M & W will
DOUBLE YOUR OLDER TRACTOR'S WORK RANGE**

Mail the
coupon to
your M & W
distributor

QUE-MAR EQUIPMENT LTD., 124 Labrosse Ave., Pointe Claire, P.Q.
FALCON EQUIPMENT LTD., 299 Danforth Rd., Scarborough, Ont.
530 First St., London, Ont.
ALLIED FARM EQUIPMENT LTD., 980 Pacific Ave., Winnipeg 2, Man.
GRAIN BELT FARM EQUIPMENT LTD., 1920 - 1st Ave., Regina, Sask.
2025 Quebec Ave., Saskatoon, Sask.
NORTHWEST FARM EQUIPMENT LTD., Cor. 7th Ave. & 6th St. E., Calgary, Alta.
14820 - 123rd Ave., Edmonton, Alta.



Please send me your FREE Live Hydraulic System literature
and name of nearest M & W dealer

Boost Forage Yields

Double your hay yields.

Increase pasture capacity by 60 per cent.

Get more pasture production earlier in the season.

Get more wheat with a higher protein content.

THESE ARE SOME of the benefits you can get from good pasture management, according to reports presented to the 1964 Agronomists Conference by Prof. R. A. Hedlin, Soil Science Department, University of Manitoba, and Mr. H. Gross of the Canada Department of Agriculture Experimental Farm at Brandon.

The most important single pasture improvement is to reseed with a grass-legume mix containing the recommended variety of alfalfa. In trials at Brandon, mixes containing Rambler alfalfa produced 30 per cent more than mixes with Vernal. In these trials no one grass species stood out but bromegrass increased the yields in the earlier part of the season. Bromegrass, intermediate wheatgrass, pubescent wheatgrass and Russian wild ryegrass gave equal yields. On land that was reseeded to grass-legume mixtures the carrying capacity was increased by as much as 60 per cent and some hay was removed from the fields as well.

Proper fertilizer practices are also important. Fertilizer trials done by the University of Manitoba show that a grass-legume mix has a high requirement for the mineral elements phosphorus and potash. Yields increased from 1 ton to 2 tons per acre when enough phosphate fertilizer was added to established hay stands.

Most of the fields in these trials were low in available phosphate. So are many of the perennial forage fields of Manitoba, according to a report by Dr. W. E. Janke, director of the Manitoba Provincial Soil Testing Laboratory. His report indicates that 60 per cent of the soil samples from forage crop fields tested very low and 20 per cent low. Only 10 per cent tested high or very high. If you have been disappointed by the production from

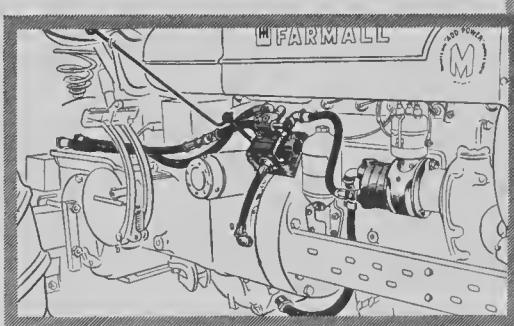
a newly seeded hay field or pasture, chances are you have not provided enough phosphate.

Howard Henry, of the Soils and Crops Branch, Ontario Department of Agriculture, points out that hay and pasture crops have large fertilizer requirements. A crop of alfalfa-timothy hay, yielding 4 tons per acre, will remove 135 lb. of nitrogen, 34 lb. of phosphorus and 162 lb. of potash from the soil. Legumes obtain nitrogen from the air, but they require large amounts of phosphorus and potash which must be supplied as fertilizer and manure to get high yields and healthy stands. Too often, hay and pasture stands are fertilized only at seeding time. As each crop is a tremendous drain on fertility, the soil becomes deficient in plant nutrients and the stand will be short lived.

Phosphate and potash are extremely important for good growth and long life of legumes. Applying 60 lb. of potash to an alfalfa-bromegrass stand on a potash-deficient soil resulted in yields of 3-4 tons; only 1.75-3.5 tons were harvested when no potash was used. After 3 years, the high potash stand contained 43 per cent alfalfa and the potash deficient stand 24 per cent alfalfa.

When nitrogen-supplying legumes die out of grass-legume stands, as much as 300 lb. of nitrogen must be provided in the fertilizer to maintain the grasses.

Returns on good management continue to come in after the improved pasture is plowed down. Trials at the University of Manitoba show that grass-legume mixes, while demanding a high level of fertilizer, add large amounts of nitrogen to the soil. This nitrogen results in substantial increases in yields and protein content of the following wheat crops.



Armyworms—in 1965?

MANY PARTS of southwestern Ontario had minor to severe infestations of armyworms in 1964. The previous outbreak of major importance occurred in 1954. According to R. H. Brown, horticulture specialist at the Western Ontario Agricultural School, the life cycle suggests that we could have infestations every year. However, other factors affect armyworm populations.

The parasites and predators of the armyworm include a parasitic fly, called the tachinid fly, which lays its eggs on the armyworm. Many of these little white eggs were found attached to armyworms last year. The maggots which hatch from the eggs feed inside the body of the armyworm, eventually killing it. This helps to keep armyworm populations

in check. Cold wet springs precede outbreaks of armyworms. Entomologists think that cold wet springs reduce the tachinid fly parasite, permitting armyworm populations to increase.

Another parasite, a small black wasp called the braconid wasp, lays its eggs inside the eggs of the armyworms. This wasp is a very efficient parasite because the armyworm is not even hatched out. Entomologists have noticed that outbreaks of armyworms occur after a year of drought. Droughty conditions are detrimental to these braconid wasps. Previous outbreaks have occurred in 1937, 1938, 1939 and 1953. Weather records show that 1936 and 1953 were dry years, and that most of the following springs were cold and wet. The type of winter is another factor to consider in a year of armyworms.

(Please turn to page 54)



Any weed is hard to kill . . . and in most cases tough, waxy leaf surfaces are the barrier that stops chemical weedkillers from killing them.

But Esteron 99* Concentrate is extra soluble in both wax and water, so it can easily penetrate the waxy surfaces of even the most hardy weeds like thistle and buckwheat, to spread its killing power . . . tops to roots!

Isn't it worth a few cents more per acre to get really effective weed control everywhere with reliable Esteron 99 Concentrate . . . the weedkiller with superior penetrating power. Stop in and ask your dealer for Esteron 99 Concentrate today.
Dow Chemical of Canada, Limited.

*REGISTERED TRADE MARK





If a new truck or tractor — or both — would lighten your workload and increase your farm's efficiency, your Bank of Montreal manager is a good man to see.

For purchases that mean profits, a B of M Farm Improvement Loan is often the best means of getting the required equipment working for you in short order. If your proposition is sound, there's money for you at the B of M for any type of farm equipment . . . at low cost and on terms suited to your income.

So why not put that new truck, disc harrow or side rake to work soon — see your nearest B of M branch today!



BANK OF MONTREAL Canada's First Bank

WORKING WITH CANADIANS IN EVERY WALK OF LIFE SINCE 1817

D338

To Sufferers of RHEUMATISM and ARTHRITIS

Have you found that drugs give you only temporary relief? Would you like to know how you may reduce your aches and pains without drugs and without surgery, a proven way?

Would you like to know how over 70,000 people got along with a non-surgical, non-medical natural treatment?

Would you like to have dispelled some of the mystery surrounding arthritis and rheumatism so that you may eat, drink and live in a manner to help your condition?

If you will send your name and address to Midwest Clinic, you will receive a clearly written, down-to-earth book on arthritis, rheumatism, sciatica, neuritis, lumbago, colon and associated chronic ailments. This book has been written on the basis of nearly half a century of experience in treating these ailments.

This FREE BOOK will explain the many types of arthritis and rheumatism and how they may be treated to reduce pain without drugs. Write for this easy-to-read book—it will help you to better understanding your own health problems. No obligation—no salesman will call on you.

MIDWEST ARTHRITIS and RHEUMATISM CLINIC
Dept. 539-D570, Excelsior Springs, Mo.

Gentlemen — Without any obligation, please send me a FREE copy of your book "Arthritis and Rheumatism."

Name _____
Address _____
City _____

Zone _____ Prov. _____

FREE BOOK

worm infestation. The winter of 1963-64 was unusually mild and mild winters do not kill many overwintering larvae.

What 1965 holds in store is not known. It is possible that the large armyworm populations have permitted a tremendous increase in parasites. However, the previous year's drought may have reduced the number of parasites and predators, since the drought extended well into the fall. Also, severe winter without much snow cover reduces insect populations.

There are no protective sprays against armyworms. Armyworms prefer low, wet areas covered by rank stands of grain or weedy areas, especially thick stands of quackgrass or crabgrass. These areas should be watched since they harbor the pest first.

prices with the exception of birdsfoot trefoil and Climax timothy. Certified alfalfas are about the same as last year with common Canadian seed still low. In spite of a small crop, red clover is much lower due to a lack of demand in the U.K. Ladino clover is in normal supply but alsike prices are higher in response to a strong overseas demand.

Common timothy, in spite of bad harvest conditions, is a little easier than in 1964. Certified Climax, however, is again a short crop and with the demand increasing year by year, supplies will be scarce and prices at a record high. Other forage grasses, including brome and orchard, are cheaper and Saratoga bromegrass is available in greater quantity. Meadow fescue will be higher priced but demand is rapidly diminishing.

A great shortage of birdsfoot trefoil seed will result in record prices for 1965. The Ontario crop was moved to the U.S.A. last autumn to satisfy an unprecedented demand for long-term seedlings in the Soil Bank program. There was no European seed last year so supplies of trefoil seed are about 50 per cent normal.

In corn, the early hybrids are in good supply, but stocks of late hybrids are smaller than expected because of last autumn's early frost.

Forage Seed Prices Up

DROUGHT CONDITIONS and the short feed supply situation have had an effect on seed prices. A rapidly developing demand for feed grains and a shortage of high quality seed are having a very strong effect on prices bid for pedigreed oats and barley seed.

In forage seeds, however, the overall trend is to slightly lower

New Sunflowers High in Oil



Dr. Stan Young of OAC examines new varieties of sunflower on trial at Guelph, Ont.

early because of their frost resistance in the seedling stage. There have been no disease problems so far.

Sunflowers can be seeded with regular equipment but you should use row crop equipment when seeding in rows. A heavy frost is needed to dry the plant sufficiently for harvesting. Sunflowers are straight combined and a special combine attachment is required to reduce seed losses. Peredovick is the main variety being grown. Like most Russian varieties it has an oil content of 45 per cent compared to 35 per cent for Canadian varieties. The seed yield of Russian varieties is the same or greater than that of Canadian varieties.

Sunflowers can be seeded as a row crop, solidly or in widely spaced rows with summerfallow in between. The latter method holds the greatest potential for farmers who summerfallow every other year.

In addition to drought resistance sunflowers offer other advantages. Early fall frosts that may affect cereal crops will not usually harm sunflowers and they can be sown

A breeding program is in progress at Lethbridge to develop a variety with a high oil content that would be earlier maturing than Peredovick which is a little late for parts of the prairies, especially during cooler years.

FREE STALLS ARE FINE (*Continued from page 25*)

day or the cows will get wet feet and soil the bedding.

"In the colder weather I found that it's all right to leave the manure in the alley for longer periods," Edwin said, "just as long as you keep throwing out any extra manure that drops in the stalls. The main thing is to keep that bedding dry. I think one of the reasons cold weather doesn't bother cows in free stalls is because there is no manure pack to get the animals all sweated up. A dry cow can stand the cold better."

BY-PRODUCT BEEF (*Continued from page 24*)

as rugged as steers of the beef breeds. Before the Holstein men take umbrage, it should be explained that the reason is one of environment, not inheritance. "We buy our short keep feeders at local and Toronto sales," says Stinson. "We don't always know where the cattle came from; quite frequently they have been accustomed to warm dairy barns and may not acclimatize well to the feedlot. Some are just hard feeders and we put this down to virus pneumonia and permanent lung damage caused when the steers were calves."

Marketing Holstein steers presents some special problems. "There is inconsistency in the grading of commercial cattle at the various packing plants," claims Stinson. "A Holstein steer off grass, which has not been fed grain, will often grade the same as the grain-fed feedlot Holstein steer, but there is no comparison in the eating quality of the two carcasses."

Despite the consumer preference for lean meat, it appears that our grading system down-grades the dairy carcass. While the meat is as tender as that from the beef breed, it is less juicy. The dressing percentage is lower and the proportion of bone is higher.

What about type? Says Stinson, "We like the 'beef' type of Holstein and discount the sharp-shouldered beast." This raises fundamental questions to which the animal geneticist does not presently have the answers.

"What," asks Dr. Nichols of Penn

Smaller cows are the ones most likely to drop their manure at the end of their stall. Kneller hopes to fix this by shortening the stalls used by smaller cows with a piece of two-by-four fitted across the front. The animals could easily duck under this when they wanted to lie down to sleep.

One morning he found a cow that was quite dirty, as if she had been sleeping in the alley. The next night he checked and saw that her stall had been taken over by a new cow

he had bought the day before. Although there were plenty of vacant stalls, she chose the alley when she couldn't get in her own.

"When I first turned the cows into this barn it took them about 3 nights to decide to use the stalls," said Edwin. "The first night they just wandered around and ate some of the clean bedding. But cows that are bought from a farm that has a stanchion barn adjust right away."

Free stalls use a lot less bedding than loose housing, although Kneller found that the cows drag some straw into the alley when they back out of the stalls. However, he thinks he could cut a lot of this loss by using

chopped straw or sawdust for bedding. At the present time, he is throwing a bale of straw into each stall every 2 weeks.

"I figure a mixture of chopped straw and sawdust or wood chips would be just about right," he stated.

Edwin and Rita Kneller went into dairying about 2 years ago. Before that, Edwin was in partnership with his father, raising grain, hogs and a few beef cattle. When the couple took over they decided to concentrate on milk production. They have a milking herd of 30 Holsteins. All their feed and bedding is grown on the farm. V



Bob Albin and his sons Doug and John not only finish all their steer calves to market weight but as well they buy 50 to 75 bull calves each year

KEEP OUT GROUND-LINE ROT!

Ground-line rot can't make any inroads here. The CCC deep penetration process insures a fence post that stands up to anything...keeps serving (and saving) 40 years or more.

WARNING!

Always look for the CCC symbol on every post - just to be sure. Some imitations claim to be good substitutes. You know better!

ASK YOUR LOCAL LUMBER DEALER

CANADA CREOSOTING DIVISION OF
CCC DOMTAR

Domtar Chemicals Limited, P.O. Box 1255, Calgary, Alta.



look into Globelite

1. ONE PIECE LEAKPROOF COVER—available on 12 volt popular sizes of Globelite Hi-Power batteries. Permanently seals the battery, ends acid leaks and power loss from cell connector corrosion.

2. New light-weight container of resin rubber permits greater electrolyte volume thereby reducing evaporation — you seldom have to add water.

3. All Globelite Hi-Power batteries are insulated with Micro-porous Rubber Separators—the most efficient insulation available today.

4. All Globelite batteries are capacity rated—the ratings permanently molded in the container or in the one piece cover. All ratings in accordance with Society of Automotive Engineers Specifications.

5. Globelite — truly a battery built for Canada's climates.

Globelite Batteries — chosen as original equipment by many leading tractor manufacturers, golf cart and electric vehicle manufacturers, motor car and truck manufacturers.



Globelite

"The Battery with a Longer Life"

AVAILABLE FROM COAST TO COAST

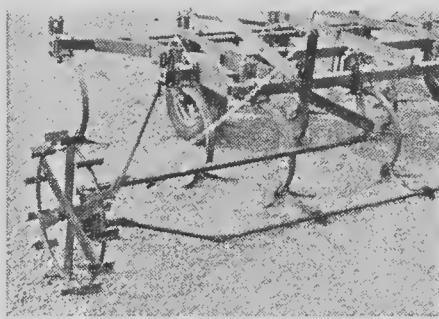
— for further information write Globelite Batteries Limited,
Winnipeg, Man. • Scarborough, Ont. • Richmond, B.C.

LIFETIME FIBREGLASS SEPTIC TANKS

Very strong, lightweight. No special equipment needed for installation. Indefinite service life because materials do not corrode. Capacities from 400 to 1,000 gallons. Tanks comply with Provincial Health Regulations. Write for prices and brochure.



Structural Glass Ltd.
466 Higgins Ave., Winnipeg 2, Manitoba



Rod Weeder Attachments to fit any cultivator

EDWARDS ROD WEEDER LTD.
(Successor to Victory Rod Weeder)

PRESENTS
the all-**NEW**

EDWARDS
ROD WEEDER



★ Spring Loaded for Rock Protection
★ Easily Folded into Transport Position

★ Sizes: 12-48 ft.
★ Controlled by one Hyd. Cylinder

Manufactured and Distributed by **EDWARDS ROD WEEDER LTD.** Box 995, Lethbridge, Alberta.

Write us or see your Local Dealer

NAME _____

ADDRESS _____

Use Insecticides Correctly

Careless use of these products will cause:

- residues in soils, crops and livestock products
- rapid build-up of resistant insect populations

RESIDUES and resistance are two important problems with insecticide uses. Strains of insects and plant-feeding mites have developed resistance to control by many insecticides. Some of the best known examples are: DDT and house flies, organic phosphates such as parathion and malathion and the European red mite, DDT and the codling moth and dieldrin, aldrin and heptachlor and root-maggots. Many poisonous residues persist in the soil for years and may contaminate root crops, forages, and water supplies before they finally decompose.

How can you minimize these two problems?

H. W. Goble, of the Ontario Agricultural College, says that broadcast treatments of the persistent insecticides such as aldrin, dieldrin, and heptachlor must be discontinued. When possible use less material. Why treat all the ground when control can be obtained satisfactorily with seed treatment or a 4-inch band along each row? It may be more expensive to get banding equipment but less harm will be done.

Aldrin will still be recommended for banding along rows of corn at planting time to control corn root-

worm, but two alternative materials, diazinon and phorate (Thimet) are available. The last two will leave no residues.

Dairymen should be more cautious than other producers. No residue of any kind is permitted in milk. It is essential that no chlorinated hydrocarbon sprays be used on dairy farms or on fields where fodder for dairy cattle is produced.

A grower can do very little to prevent resistant strains developing except to use insecticides as sparingly as possible. Always band rather than broadcast. Do not use fertilizer-insecticide mixtures. There is strong evidence that resistant strains develop more readily where broadcast treatments are used. Aldrin-resistant strains of root maggots threaten to ruin the rutabaga-growing industry in Ontario unless precautions are taken.

Growers should use all non-chemical methods of insect control including rotation of crops where practical, varieties resistant to insect attack and proper tree pruning. With many crops, however, insecticides are essential for profitable production and with some crops, such as fruit and vegetables, they are necessary to get a saleable product. ✓

Fertilizer Can Be an Explosive

CAUTION! When you're handling fertilizer grade ammonium nitrate, remember that it will burn and it can be a fire hazard.

Here are some general safety rules to follow when you are handling it. Ammonium nitrate should not be loaded with any type of explosive, ammunition, detonators or poisonous gases and liquids. Like any inflammable material it should not be exposed to heat. If you should spill some ammonium nitrate, sweep it up and dispose of it promptly. Such contaminating material as straw may make it more combustible.

When you are hauling ammonium nitrate fertilizer, be sure to:

1. Clean out the truck box.
2. Remove tools or projecting nails that might tear the bags.

3. Build the load within the body of the truck and so that the tail gate may be closed. Cover the load.

4. Brace the load so that it will not move within the truck box.

5. If you are hauling a mixed load place the fertilizer so that you can get at it quickly for removal.

6. Keep the fertilizer away from all fire and flames and observe the "no smoking" rule during loading and unloading. Do not heat the truck box with any type of heater which may be a potential fire hazard.

If you have to deal with a fire where ammonium nitrate is involved, use large quantities of water as quickly as possible to keep the mass

of fertilizer cool and put the fire out as quickly as possible. Do not use spray or fog nozzles or chemical extinguishers.

Do not breathe the extremely toxic fumes which are produced by burning ammonium nitrate. Open all doors to increase ventilation in order to get rid of the gases. Stay up wind of the fire, and do not attempt to remove the ammonium nitrate unless it can be done without inhaling the fumes.

If the fire is hot enough, steam pockets will form in the pile and cause minor explosions. Fire fighters should remain behind some substantial shelter. Molten ammonium nitrate should not be allowed to run into drains or sewers and any wood which has become impregnated with ammonium nitrate should be disposed of as it will be a future fire hazard. ✓

Dorval Oats

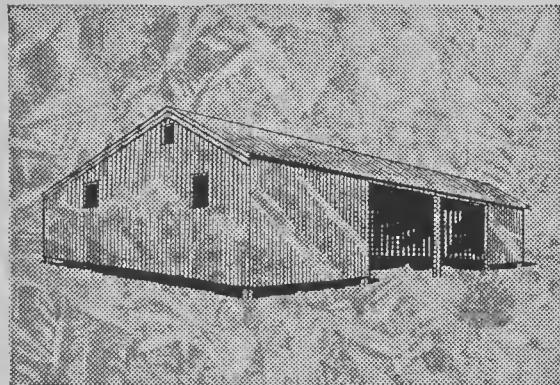
A NEW VARIETY of oats, Dorval, is recommended in Quebec and eastern Ontario for 1965. This is high yielding variety, slightly later maturing than Garry, with good grain quality and lodging resistance. Dorval is not resistant to rust and should not be used in areas where rust is known to be a problem.

Limited quantities of first generation Registered seed will be available for distribution to seed growers this spring. However, seed stocks will not be available for general grain crop production this year, due to the short supply. ✓

How long will your equipment last?



Protect your investment with GALVANIZED STEEL!



How long will your farm equipment last? That depends, to a large extent, on how well you protect it from the weather. Rain, snow and ice will cut years off its life expectancy.

According to a recent study, maintenance costs on equipment drop as much as 40 per cent when it is properly protected from the weather. For example, the life of a tractor can be extended as much as 20 per cent and drill life, 60 per cent. You can expect cultivators to serve you 25 per cent longer and combines 34 per cent longer. As a businessman, you know what this can mean in terms of lower depreciation and higher trade-in values. Another mighty important point; you waste far less time repairing farm machines when you protect them from rust and other weather damage.

Certainly, a galvanized steel implement shed is one of the wisest investments you can make. How big is the investment? Probably far less than you think.

Because steel sheets have high structural strength, framing members can be more widely spaced. Erection costs less too—in many types of construction, panels can be quickly clipped or bolted together. This also means extensions and alterations can be made quickly and economically.

Think of your savings in building maintenance, too. Steel is strong; it defies impact that will damage other materials. And, of course, nothing stands up in rain, hail, and wind as well as galvanized steel. When considered in these terms, a galvanized steel struc-

ture costs less than other types.

Galvanized steel is clearly your best bet for farm buildings—and, when thinking of steel, it will pay you to specify *Dofasco Premier*. It is made by the continuous galvanizing process in which the zinc coating is permanently bonded to the steel. That means moisture can't get a start, so you get maximum protection from rust and corrosion.

For more facts on galvanized steel farm buildings, contact your fabricator, farm equipment dealer, or steel warehouse, and mail this coupon.

**DOFASCO
OF HAMILTON**



FREE "How to Build" booklet.
Tells how to estimate requirements
and apply steel sheeting.

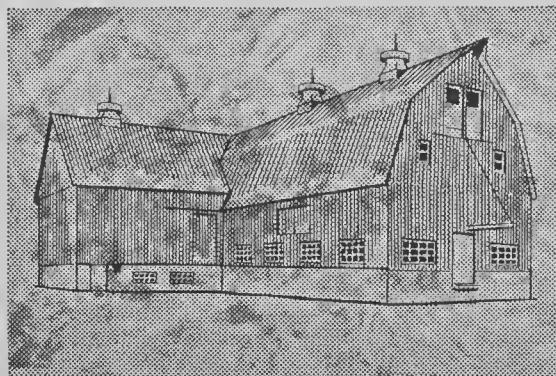
Mail coupon today to
FARM BOOKLET, Box 250, Hamilton, Ontario.

NAME _____
(please print)

ADDRESS _____

PROVINCE _____

23-5578



McKEE GRASSLAND HARVESTER



75,000 farmers in Western Canada would purchase a McKee One-Man Grassland Harvester if they knew exactly what it could do for them.

Hook a good tractor to a McKee Harvester with a 30 ft. Self-Unloading Forage Box in tow and one man can put up more feed in a day than he ever dreamed possible, whether it is grass silage, corn silage, tame hay, oat hay or straw.

If you want to cut out the cost of twine, do away with expensive labour and get out of doing a lot of hard work yourself this coming harvest, then write one of the companies listed below to see where you can purchase a McKee Harvesting outfit. (We have Dealers from coast to coast.)

LAWSON

Frank Lawson & Sons Ltd.—601 Ninth St., Brandon, Man.

NANCE

Nance Co. Ltd.—Red Deer, Alberta

ROMAC

Romac Dist. Ltd.—2225 Faithful Ave., Saskatoon, Sask.

ATKINSON

Atkinson's Farm Equipment—Box 22, Amherst, Nova Scotia

McKEE BROS.

McKee Bros. Limited—Box 30, Elmira, Ont.

McKee Bros. Limited—Box 239, Chateauguay, P.Q.

Horticulture

Launch New Program for Roadside Management

PLANS TO "FACE-LIFT" the appearance of rural roads across the U.S. border in Wisconsin may have a practical use in Canada. Wisconsin's rural roadsides may soon undergo a major change if a new right-of-way management program catches on. The plan—called selective brush management — promises to provide wildlife cover and food, increase the esthetic value of the country road, and make management of roadside rights-of-way easier. These added benefits come at a cost that is equal or less than many right-of-way management programs now in operation say Robert Ellarson, University of Wisconsin wildlife specialist and Ron Doersch, University of Wisconsin weed control specialist. Both are members of a group that has spent considerable time developing the new plan.

This plan is practically the opposite of many right-of-way management programs.

In the past, most of the roadside tree cutting and brush removal was done with the hope that snow removal and weed control costs could be reduced, and that visibility and safety along these cleared roads would be increased.

Such a program looked good at first. But experience has shown that grass cover alone is not always satisfactory. Weeds are still a problem, sometimes a bigger problem than before the brush removal. Grass alone often proved to be an inadequate barrier against re-establishment of trees which eventually entangle power and communication lines and create road icing hazards. Maintenance costs were not reduced. The loss of wildlife and esthetic values along many country roads often proved to be a high price to pay for the right-of-way management system.

In simple terms, selective brush management consists of removing tall trees, undesirable woody shrubs, and noxious weeds. With the competition from other plants and trees removed, desirable plants and shrubs (such as juniper, dogwood, elderberry, sumac, nannyberry, rose, bittersweet and grapes) thrive and eventually prevent trees or other undesirable plants from establishing themselves.

THE IDEA of selective brush management grew out of a general dissatisfaction with systems in use on strips of land along highways, railroad tracks, and under electric and communication lines. Ellarson and Doersch are members of a working group organized under the Natural Resources Committee of State Agencies.

In 1958, the working group published the first of its findings. One

major conclusion was that "while these rights-of-way must be managed first for the purpose for which they were designated, they can best serve the public interest if they are managed for multiple use."

Following the 1958 report, the working group carried out further field studies. Major field work and observations were carried out in three townships where wildlife population data, particularly on quail, was available, and because the area was reasonably representative of other state agricultural areas.

This study is not yet complete but results now available indicate that selective brush management has several advantages over the maintenance of grass right-of-way. Ellarson and Doersch list five major advantages:

- Tall-growing trees can be eliminated. Large trees cause problems when they grow into power and communication lines, when strong winds cause limb breakage or uprooting which often blocks roads and damages utility lines, and when large trees shade roads during the winter and cause icing.
- Low-growing shrubs provide valuable cover and food for wildlife and pollinating insects.
- Exposed soils will be covered as low-growing shrubs and woody vines develop. This will help reduce soil erosion.
- Noxious weeds can be controlled by selective spraying.
- Such plants as ragweed, bull thistle, Canada thistle, and other weeds will not increase under selective brush management, and eventually give way to more desirable low-growing shrubs.

Ellarson and Doersch both emphasize that selective brush management is not the answer to every mile of right-of-way. Its best use will be on roads where travel is light and where all native brush is not already removed. However, Ellarson looks forward to a day when native shrubs will be re-established on roadsides now cleared.

In Wisconsin, the management program will be employed only along given sections of any road. Where low-growing shrubs create a driving hazard at intersections and near driveways, they will be eliminated. Shrubs can also be removed where snow-drifting is likely to be a problem.

The program has the approval of the State Highway Commission. Also backing the plan are state and federal agricultural departments, the University of Wisconsin and other educational groups, railroads and power companies.

New Table Cucumber

RESEARCHERS at CDA's Ottawa research station report a new variety of slicing cucumber resistant to both scab (spot rot) and mosaic virus disease. The new variety—Armour—is the first Canadian table cucumber with resistance to both diseases according to V. W. Nuttall. It was developed specifically to meet a need for a resistant variety in Eastern Canada where scab and mosaic disease cause severe damage each year.

Armour gives long, straight, firm cucumbers with thick, crisp and sweet flesh. They retain their dark green color very well after being picked. Because the ends of the cucumbers are not tapered, there is less wastage when they are prepared for eating.

The new variety is earlier than most mosaic-resistant cucumbers but is slightly later than the disease-susceptible Marketer variety.

It grows best on well-drained fertile loams. A sandy loam is recommended for an early crop.

In tests over the past 4 years, Armour won a high rating from home and market gardeners in the Ottawa Valley and in the area around Fredericton, N.B. In these areas, the new variety had a longer cropping season and consistently produced more marketable fruit than did disease-susceptible varieties. Stock seed of Armour is now being multiplied by Canadian and American growers. V

Tomatoes Top Home Garden Crop

SURVEYS INDICATE tomatoes still are the most popular single garden crop in home gardens. This popularity can be traced in part to the high yields possible from a small space, and in the varied ways tomatoes can be prepared for use.

According to Harry A. Graves, North Dakota State University Extension Service horticulturist, Early Chatham and Fireball lead among varieties recommended for the state. Housewives seem to like Early Chatham best because many of its fruits go into quart jars whole and make an attractive pack. Seed of Early Chatham and Fireball can be started indoors and planted directly into the garden about May 25. Plant 3 or 4 seeds in hills 4 feet apart. Thin to the one plant when in the 4-leaf stage.

The variety Sheyenne remains popular. Developed by horticulturists at NDSU it is an early variety, bears good-sized fruits and yields well. Plants should be spaced 4 by 5 feet. It is desirable to plant Sheyenne seed indoors and set plants into the garden about June 1, after danger of frost is past.

Other varieties developed for the central plains area are: Moreton Hybrid, an early, heavy yielding, long-vined type suitable for staking, and Big Boy Hybrid, with its larger fruit. However, this variety is later and has not yielded well in university trials. V



Seed as early as you like...

Pick your own date to kill wild oats

Delayed seeding lowers crop yields...
Avadex* kills wild oats below ground as they germinate

Now you can seed as early as soil and seasonal conditions permit—raise longer-maturing, heavier bearing varieties—without concern for wild oats. Avadex and Avadex BW pre-emergence wild oat killers destroy these yield reducers below ground, as they germinate—before they can rob crops of moisture and vital nutrients. And there is no critical timing of application. Avadex can be applied anytime *before* seeding and up to the time of crop germination. Avadex BW, for Spring and Durum wheat, can be applied anytime *after* seeding and before crop germination.

Long term tests in western Canada comparing delayed and normal dates of seeding in wheat show two very important results of delayed seeding:
a) The number of wild oat plants are reduced.
b) The yield of wheat is reduced.
Since the tests show early seeded wheat, competing with a full growth of wild oats, able to outyield late seeded wheat, it is apparent that the use of Avadex BW with early seeded wheat will equal or better the control afforded by delayed seeding and, at the same time, increase the yield difference. In other words a combination of early seeding and Avadex BW will develop more bushels than early seeding alone and considerably more bushels than delayed seeding. With other crops the effects are similar.

Here are the results of delayed seeding tests with controlled wild oat infestations carried out by the University of Manitoba in 1964.

FLAX YIELDS IN BUSHELS PER ACRE

WILD OAT DENSITY (Plants per sq. yd.)	NONE	50	100	150
SEEDING DATES				
May 29	18.4	10.5	7.4	7.5
June 5	16.7	9.8	6.9	5.6
June 10	11.6	3.6	2.3	0.9
June 15	10.3	1.6	0.8	0.6

(Source: University of Manitoba, Plant Science Department, Wpg., Man.)
(Note: The cost of a full Avadex treatment in flax is approximately 1 1/4 bushels of flax per acre.)

Avadex and Avadex BW let you seed earlier...and knock out the wild oats as they germinate. With Avadex, flax can be grown as a clean-up crop. Treatment can be made two, three or four weeks ahead of seeding time, without loss of chemical or long lasting control action.

Avadex and Avadex BW give you an earlier, easier, faster harvest—you harvest more and store crops dry. And cleaner crops mean less dockage as well. Ask your farm supply dealer for the factual combined Avadex-Aavadex BW manual featuring step-by-step instructions on wild oat control. Or write: Dept. D, Monsanto Canada Limited, Box 147, Winnipeg, Man.

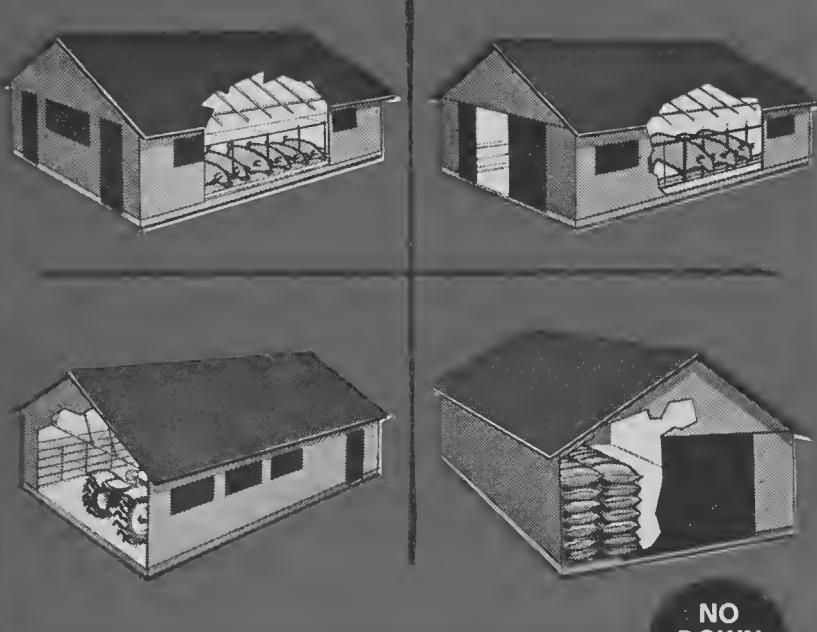


Avadex & Avadex
PRE-EMERGENCE WILD OAT KILLERS...
Products of MONSANTO CANADA LIMITED *T.M. MONSANTO COMPANY

Buildings

Locating Your Feedlot

It needs drainage, sunshine and wind protection



NO
DOWN
PAYMENT

only TIME buildings serve all farm requirements

Versatility is the "keynote" of all TIME Buildings. Basic design of straight-wall clear-span construction makes pre-assembled TIME Buildings easy to convert to dual or multiple use. With open floor area, large sliding entrance door and ample window openings, they are adaptable as hog barns, chicken houses, cattle barns or machine sheds.

A TIME Building comes in one complete package — easy to erect with only a saw, hammer and wrench. Before you build compare the advantages of a TIME Building. It's the saving of time and money that counts!

Versatile TIME Buildings save you money from start to finish.

TIME BUILDINGS ARE AVAILABLE in these sizes and finishes:

SIZES:

- Wall heights of 8, 10, or 12 feet.
- Widths 28, 32, 36, 40 or 50 feet.
- Any length in multiples of eight feet.

FINISHES:

- Exclusive Cecoroll Steel or Staincote Plywood walls.
- Exclusive Cecoroll Steel or 210# Asphalt Shingle roof.

CLIP AND MAIL THIS COUPON TODAY

CG-1

Please send me my free brochure on TIME BUILDINGS for the Farm.

NAME _____

ADDRESS _____

TELEPHONE _____



Dept.D, P.O. Box 920, Lloydminster, Alberta

PLAN YOUR feedlot layout. Remember, the time to make final adjustments in a farmstead layout is when your ideas are on a sheet of sketch paper. Erasers are cheap, but changes you decide on after construction begins can be expensive.

Specialists at the Iowa State University offer some tips to farmers who are planning a feedlot setup.

Start with a good map of the existing farmstead as a basis for planning. Show the exact location and size of all buildings, drainageways and the slope of land.

Before you decide what changes in existing buildings, new construction or rearrangement you want to do, it is essential to:

1. List the facilities that might be adapted to fit your plans.
2. List your plans for immediate growth and possible expansion.
3. Compare commercial equipment and farm-built mechanical equipment. Visit feedlots in your area where mechanized systems and labor-saving methods are being used. Learn all you can about livestock facilities presently in use.
4. Consider sources of feed grains, forages and bedding.

The year-round climate influences a livestock operation. It isn't the average weather that is critical; it's the extremes. You can ask long-time farmers about the coldest winter, the hottest summer and the driest and wettest seasons they can remember. Also look up local weather records.

The biggest mistake you can make is failure to plan room for expansion. This often results in difficult and expensive alteration to provide for more livestock as the enterprise increases. Farmers should not hesitate to occupy adjoining crop land for feedlot expansion. The conveniences and increased returns outweigh crop values. If you do not have sufficient land area in or adjoining your present farmstead, do not hesitate to move to a new site. Often it is cheaper to duplicate a system than to expand on the present site. For example, the cost of mechanical components for a vertical silo and auger bunk system become excessive beyond 400 to 600 head at one silo cluster, and duplication provides the most economical expansion. Some new techniques, such as slatted floors for swine, do not adapt readily to remodeled buildings. New construction will often be more satisfactory.

The ideal site for a livestock production unit is either on a south slope or on a ridge where water drainage will be toward the south, east or west. This permits roads and access areas to be at the north when feed and bedding must be hauled into storage. Access roads

for filling silos, bulk bins or feeders should not pass through lots when livestock are confined. Feedlots laid out on north slopes dry slowly.

Arrange for a minimum slope of 3 inches for every 10 feet in both paved and unpaved lots. Experience with paved lots shows that slopes up to 8 per cent (8 feet of slope per 100 feet of lot) are satisfactory.

Grading around the buildings may be needed. Grading should be completed before construction begins. Concrete and masonry rubble and broken stone from old buildings pushed together in a low mound and covered with a layer of soil will make a well-drained, elevated site for resting livestock. Some feeders prefer to erect low earth mounds, 2 to 4 feet high, to provide a resting place for stock.

Plan for paving or "hoofproof" surfaces at least 6 feet wide along all feed bunks and around waterers. Provide hard-surfaced areas with proper slope in front of all livestock shelters, whether they're used for beef, dairy cattle, swine or sheep. The hard surface in front of the open sheds provides good footing for the animals and will encourage them to use the protection provided by the buildings. Extending the concrete back 6 to 8 feet into the shelter will stabilize the area with heavy traffic.

Getting manure out is the biggest single problem of most feedlots. New techniques of manure handling and disposal offer solutions to many cleaning problems. Proper arrangement with respect to natural heat sources, light and sunshine, can make cleaning livestock lots and buildings easier.

A south-front exposure for all open livestock buildings, with feedlots sloping generally southward, is most desirable. Lot surfaces should be shaped and sloped so that rain water, melting snow and free-flowing manure liquids drain away from buildings, feed bunks, waterers and storage structures.

Feed bunks of either auger or fenceline type work best when laid out north to south. This permits sunshine to strike both sides of the feed bunk, thawing frozen manure for periodic cleaning.

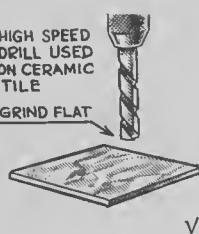
Open-front livestock buildings that face south provide the best protection from winds. Never locate feed bunks directly in front of open livestock buildings in a way that blocks the prevailing summer breeze. These can provide summer ventilation.

Tall structures should be located where their shadow patterns will not fall across the feedlot, since ice and frozen manure tend to build up in the shaded areas. Silos should never be placed at the south end of a mechanical auger bunk.

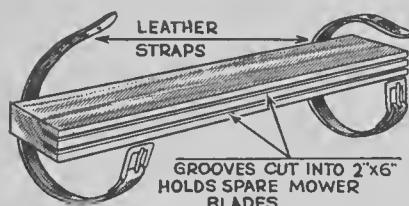
Workshop

Ceramic Drill

If you don't have a carbonyl drill, just grind flat the point of an ordinary high-speed drill bit. It will work well on ceramic tile and many masonry tile surfaces. — H.M., Pa.



Mower Knife Carrier



A 2 by 6 plank with two grooves, half inch apart, on either side and with straps fastened at either end, will serve as a protector for four mower knives. Sharp knives strapped into this carrier will be protected during transit to the field or while being carried on implements. — J.W., Alta.

Ladder Balance

Mark the balance point of long ladders with a piece of black friction tape. This saves the search for the balance point each time that you have to carry the ladder. — J.W., Man.



Stops Rooting

Pigs can be stopped from rooting under a gate by nailing an old bucksaw blade to the bottom of the gate with the teeth pointing down and extending slightly below the lower edge. — P.O., Sask.



Welding Aid

Align small broken parts in a bucket of sand before brazing or welding. The sand permits shifting the parts until they are in proper relationship but holds them firm for tacking. — H.J., Pa.



Brushes for Cleaning

Old paint brushes are handy for cleaning machinery parts in the shop during farm repairs and service. — R.P., Man.



only golden arrow

DOES YOUR SPRAYING AS IT SHOULD BE DONE AND SAVES

YOU MONEY, TOO !

Golden Arrow, Canada's largest sprayer manufacturer, has such a wide range of sprayers you'll find one exactly right for your size of farm and type of crop. For instance, in the Spray Master Field Sprayers, now in seven models, you can get a range of tank sizes from 166 to 420 Imperial (200-500 U.S.) gallons and boom coverage from 33 to 58 feet.

And each Golden Arrow Sprayer has so many time-saving, money-saving features. In only 90 seconds, all Spray Master models can be changed from spray to trail positions. The outrigger wheel assemblies have an exclusive locking device for spray and trail positions, to prevent shimmy. All tank lids are hinged, properly vented and sealed to prevent leakage.

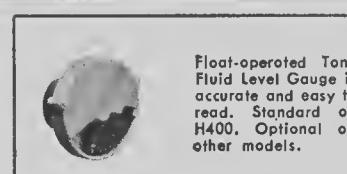
Golden Arrow's high standard of quality in materials and workmanship is carefully maintained in each sprayer and is backed up by a full one year guarantee. Golden Arrow takes pride in its product . . . and in its thousands of satisfied customers.



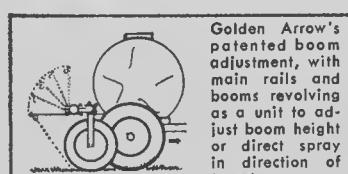
Why don't you see your local Golden Arrow dealer this week?



Golden Arrow's patented Clamp-On Nozzle—no trouble-some threads or lock nuts, simple alignment without loosening clamp. The filter is in the boom to eliminate a sediment trap.



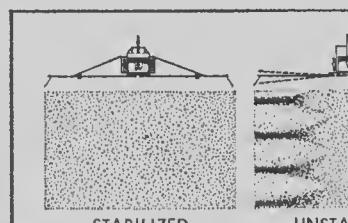
Float-operated Tank Fluid Level Gauge is accurate and easy to read. Standard on H400. Optional on other models.



Golden Arrow's patented boom adjustment, with main rails and booms revolving as a unit to adjust boom height or direct spray in direction of travel.



Only the highest quality Alcan Aluminum is used in Golden Arrow tanks and booms. Lightweight, guaranteed not to rust.



High "hidden losses" can result from boom instability which gives a damaging chemical dosage in some spots, leaving others completely barren. This is no more practical than allowing a seed drill to swing back and forth. Golden Arrow's properly-designed, fully stabilized booms save money by ensuring a constant, even spray pattern.



Spray Master H400 tandem trailer field sprayer with 420 Imp. (500 U.S.) gal. tank and 58' boom coverage.



The new Golden Arrow Fertilizer Spreader Model 601 offers effective 40 ft. coverage, has 3,000 lb. hopper capacity.

For more detailed information ask for our 16 page free booklet, "Things you should know about buying and operating a sprayer."



golden arrow

1439 - 17th AVE. S.E. CALGARY, ALBERTA, CANADA • PHONE: A.C.403, 273-3341

SOLD BY PROMINENT DEALERS ACROSS THE PRAIRIES



Cornell University researchers have developed light and dark meat turkey rolls



Among new products researchers have turned out are packaged ready-for-the-pan chicken sticks



You'll soon be able to buy your hard-boiled eggs in a package ready for slicing. The above photograph shows the various steps in the processing



A bake-and-serve chicken loaf is only one of 35 new poultry products developed in recent years

New Poultry Products

Country Guide Field Editor Peter Lewington visited Cornell University in New York to learn more about the many new and imaginative poultry products developed there. If they are adopted in Canada they could expand the market and help boost prices

NOT SO LONG AGO the salvage value of a laying hen was just about equal to the cost of replacing her with a ready-to-lay pullet. Recent quotations for live fowl were just 7 cents per pound in Vancouver and Montreal, while producers in the Winnipeg area got all of 4 cents a pound. "Even at these prices," said one producer ruefully, "you don't dicker, you are glad to have a buyer."

I went to Cornell University, at Ithaca, N.Y., to see if researchers there had any answer to this problem. Dr. Robert Baker of Cornell told me, "Because of the low price for fowl, poultrymen are faced with tremendous depreciation in their laying hens. At the present time the second largest cost of producing eggs is the depreciation of the hen. It amounts to approximately 8 cents per dozen eggs produced."

Egg prices too have been at distressingly low levels; one London, Ont., chain store was selling eggs at "the lowest prices since 1929." An overwhelming weight of evidence shows that low prices are themselves not enough to move products. Robert Baker has made a different attack on this deep-rooted poultry industry problem. Baker has now devised 35 new poultry products and his colleague, Dr. Larry Darrah, who has already market-tested 17 of them says, "We are delighted with our progress. We now have a wide variety of poultry products which can be taken up by industry." The techniques used in making these new products are free for the asking and there are no restrictive practices or patents.

Back in 1960 the research people at Cornell decided that developments in the food industry were not working to the advantage of producers — a fact now abundantly clear in Canada. Further processing, it was found, had benefited meat marketing. Developments in potato processing had stemmed the decline in potato consumption. It seemed logical that further processing could offer some benefits to the poultry industry.

SWING TO CONVENIENCE FOODS

Egg consumption has been declining and a prime cause has been the evolution of competitive convenience foods. The overexpansion in broilers drastically curtailed the market for fowl, a move which has been aggravated by the trend to lighter-weight laying hens.

The Cornell researchers decided to do something about this and set themselves these targets:

- Development of new egg products which would not compete with the consumption of shell eggs.
- New uses for fowl and "B" grade broilers (broilers with bruised wings or broken legs are better merchandised in processed form).

- Convenience items which would not compete with broiler sales.

Having dined off "Chicken Franks" and enjoyed such cold cuts as "Poulet Supreme," I can testify to the large measure of success achieved.

Fourteen of the new products are egg items and it takes little imagination to conjecture what value these could be to our producers. A slice of French toast containing half an egg can be cooked just by dropping it in the toaster; the ready-to-cook frozen "Western" has chopped onions, ham, seasoning and eggs; the hard-cooked egg roll could expand the use of eggs in salads and sandwiches by the institutional trade. The eggs used in this process could be peewee eggs and poor shell quality eggs, both of which presently sell at a discount.

The new poultry meat products which utilize fowl include "Bird Dogs," "Chicken Bologna" and "Chicken Sticks." A patented machine for mechanically de-boning uncooked, eviscerated fowl has recently been perfected and this could well stimulate greater interest among processors; fowl boned by hand will yield 55 per cent as usable meat while the machine will reduce costs and give a yield of 50 per cent.

Smoked broilers and a variety of meat loaves are designed to boost broiler meat sales. The bake-and-serve chicken loaf, for instance, includes over 80 pounds of chicken and chicken products and 6 pounds of eggs in each 100-pound batch.

BENEFIT OTHER PRODUCERS

Some of the developments in new poultry products benefit producers of other farm products.



"Breakfast-in-a-glass" is a combination of eggs and apple juice. Further research is already being done in an effort to extend its shelf life

"Breakfast-in-a-glass" is a combination of eggs and apple juice. Further research is necessary to extend its shelf life. One interesting sidelight of the marketing tests has been the fact that new poultry meat products have expanded the total meat market, rather than stealing a slice of the market from established products.

Marketing new products takes patience, imagination and skill; it also takes some crafty psychology. In one test, "Chicken Hash" was given the more appealing name of "Chicken Delight" — and sales doubled. The experiment in marketing "1-day-old eggs" was a flop despite the fact that day-old eggs are really fresh. Consumers evidently didn't see it that way and either associated the eggs with such depreciated items as stale day-old bread or they mistakenly believed that the eggs had to be used that day! Sales shot up when the eggs were labeled "Farm Fresh."

No single action is going to provide a cure-all for the problems of the poultry industry. Overproduction has taken the glitter off ever-increasing efficiency; the advent of large producers has put the industry into a strait jacket. No longer does production react with sufficient flexibility to stabilize prices at profitable levels. The precise effect of further poultry processing is in the realm of long-range projection, based on the current limited marketings. However, the best guess is that it could increase the price of fowl by 2 cents a pound. Not, perhaps, a large amount, but a significant increase for the hapless producer who is currently sacrificing fowl at 4 cents a pound. One further advantage is that fowl are a by-product of egg production and their modest increase in price should not contribute to expansion in egg production.

Turkeys Grow Faster on Pellets

FEEDING TRIALS at Swift Current showed there is no advantage in crushing or grinding grain for growing turkeys. However, if the ration can be pelleted cheaply, this may be the best way to feed it, according to R. M. Blakely of the Canada Department of Agriculture Experimental Farm at Swift Current.

Most turkey men feed growing birds a ration of pelleted concentrate with whole grain. In the Swift Current trial, this ration was fed in four different forms: All mash; all pelleted; a pelleted concentrate mixed with whole wheat, and crumbled concentrate mixed with ground or cracked wheat.

The completely pelleted diet gave better gains and feed conversion. The pelleted concentrate with whole wheat and crumbled concentrate with ground wheat rations were intermediate between the mash and all pelleted ration. The gain in weight and feed conversion of the birds on the mash ration was poorer than any of the others. A further disadvantage of the mash form is the loss through blowing out of feeders.



Niagara makes treating seed easier in 1965!

1 IT'S EASIER TO REMEMBER THE NAMES.

Just remember NIAGARA and you have the first three letters of the important liquid seed dressings: NIATOX for protection against smut, root rots and seedling blights; NIADUAL for protection against those diseases and wireworms; and the NIAMIST 200, NIAGARA'S exclusive on-the-farm seed treating machine that gives you a tailor made job with just the right amount of liquid NIATOX or NIADUAL on every seed. (Remember liquid Heptadrin for those who have a wireworm problem . . . it's NIAGARA's high concentrated wireworm killer).

2 IT'S EASIER TO BE SURE YOU DON'T DE-

LIVER TREATED GRAIN. With treat 'n' sow you treat exactly the amount of seed you use and there is no need to have treated seed on the farm . . . after seeding . . . occupying valuable storage space . . . no chance of feeding treated grain or delivering by mistake to your elevator. Treat 'n' sow is a valuable NIAGARA specialty.

3 IT'S EASIER TO KEEP HEALTHY WITH NI-

GARA SEED DRESSINGS. 'Non volatile' means that there's no sickening mercury fumes. NIAGARA seed dressings work better without fume action . . . and so will you!

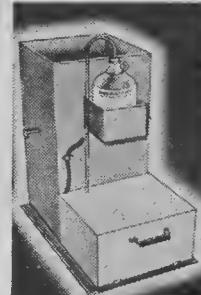
4 IT'S EASIER TO HAVE YOUR SEED READY

WHEN YOU NEED IT. 'Treat 'n' sow' is a NIAGARA first. With NIAGARA seed dressings, you can treat anytime . . . five minutes or five months before you start sowing. No fussing about storage after treatment and before seeding. You don't have to wait for any kind of 'vapor action' to work because NIAGARA seed dressings have a non volatile action. They work on contact. You can treat right from the bin into your truck or before you get busy with seeding.

5 IT'S EASIER TO GET EFFECTIVE PROTEC-

TION FOR YOUR SEED. With NIAGARA seed dressings, everything is easier . . . and so you're more likely to do a good job and get effective protection against soil and seed-borne diseases and wireworms when you use NIAGARA. Better protection means healthier crops, higher yields and bigger profits. There's probably no easier way to increase your income from the same amount of fieldwork. Treat with NIAGARA seed dressings: NIATOX, NIADUAL, HEPTADRIN, the liquids; NIAMIST 200, the machine that spreads the liquids almost perfectly; PURASEED, and PURADRIN, NIAGARA'S favourite seed dressings in powder form. It's five ways easier with NIAGARA in 1965!

Save \$20 on the NIAMIST 200!



Your Niagara dealer can explain how you can get a discount of \$20.00.

Exclusive action of high speed disc breaks liquid NIATOX or NIADUAL into a fine mist . . . flow of seed and liquid are regulated correctly. 'Treats every seed right!' Regular \$119.50 (with motor) Special \$99.50 (with motor) at NIAGARA dealers.

NIAGARA BRAND CHEMICALS
(Division of FMC Machinery & Chemicals Ltd.)

1326 Atkinson St., Regina, Sask.
(or Burlington, Ont.)

I want to make seed treating an easier chore. Send me Niagara's booklet "Farmer's Guide to Proper Seed Treatment". Make sure information about the NIAMIST 200 is included.

NAME

ADDRESS

**The way to bring order out of chaos
in Ontario's milk industry,
says the report of the
Milk Industry Inquiry Committee . . .**



Guide photo

This milk delivery horse is symbolic of the past; the milk inquiry recommendations would bring the milk industry into the second half of the 20th century.

Set Up a Milk Pool

by PETER LEWINGTON
Field Editor

THE RECOMMENDATIONS of the Ontario Milk Industry Inquiry Committee were released last month.

It will be recalled that the inquiry was initiated when the dairy industry in Ontario was in a ferment. Painstaking hearings were held and the findings of the inquiry have been long anticipated; it is not apparent why, at this late date, it was necessary to issue only one section of the complete report.

The report's recommendations are explicit:

"The milk industry has lost respect for and confidence in the Milk Industry Board, and the Board should cease to exist." It would be replaced by creation of the Ontario Milk Commission. The committee envisages a highly competent and autonomous commission — the commission should have an office physically separated from the Ontario Department of Agriculture; the chairman's salary should be a minimum of \$25,000 and he should have access to a battery of well-paid experts.

The proposed commission would be surgeon, policeman and judge. The milk industry, it appears, is sufficiently antiquated, confused and fragmented to need surgery, rather than aspirin. But it remains to be seen whether the provincial government will have the stomach for it. Queen's Park has its share of dusty archives; nearly 2 decades ago the Ontario Royal Commission on Milk advocated a marketing organization of all milk producers in the province.

The new commission would aim at ending suspicion and sharp practice and would foster responsible leadership. Specifically, a milk producers' pool would be established for the populous southern part of Ontario; all farmers would have an equal opportunity to participate and the pool would be required to accept all "A milk" offered to it by producers. Cream producers and their marketing board would not be affected.

WANT EXPERIENCED BOARD

Again the committee calls for adequate remuneration to ensure impartiality and independence. To this end it suggests that the chairman of the pool be paid \$25,000 per an-

num with a 3-year guarantee of salary. The chairman would be assisted by an advisory committee; three members would be appointees and two would come from each of the producer groups — the Whole Milk Producers' League, the Ontario Concentrated Milk Producers and the Ontario Cheese Producers' Marketing Board. The six producer members, upon election, would be deemed to be representing all producers, not the special interests which elected them. In anticipation of the reaction to some of its proposals for drastic surgery the recommendations repeatedly refer to the need for good communications and the expression of producer views. Following a three-phase "teething" period the pool would evolve as a producer organization, administered by an elected board of directors.

In recognition of the diverse economic and geographic features involved, the pool would deal primarily with the southern part of the province. Northern Ontario would continue to function as a number of small markets, but would be protected from milk dumping because milk can be produced at lower cost in southern Ontario.

BREAK WITH TRADITION

The committee's recommendation for the composition of the board of directors is another break with tradition. It suggests that experienced persons be included from the fields of finance, marketing and administration. The new board would not be a reincarnation of the past, but a concept new to producer marketing organizations. Confusion between policy and detailed operating decisions, an inherent weakness in the past, would be guarded against.

The quota system, which has developed in Ontario fluid milk markets over the past 30 years, has been a most controversial point to reconcile. If the recommendations are implemented, a base system would replace the entrenched quota system; it would avoid the high built-in capitalization costs associated with quotas. In the view of the com-

mittee, agriculture and society at large would benefit by these changes. To compensate the farmers who have built up quotas, a single payment of \$5 per pound of daily quota is recommended. This one-shot payment would amount to some \$20 million.

In obvious fear of undue regimentation and complex regulations, the recommendations make provision for producers who do not wish to join the pool. It is apparent, however, that the emphasis on production of "A Milk" and the expected economic advantages stemming from the pool, would make it increasingly attractive.

SUSPEND CHEESE BOARD

Turning its attention to cheese production, the Inquiry Committee gives due recognition to the importance and quality of Ontario cheddar. However, a frigid note begins creeping into the report when pricing and maintenance of price levels are explored.

"Our study of the (Ontario Cheese Producers' Marketing) Board's affairs has led us to conclude that they are dominated by one man (Chairman Hector Arnold), and that there is serious lack of objective recognition of the economic implications of many acts such as price setting, allocation of available supplies of cheese and acquisition of warehouse facilities." The report singles out construction expenses of \$135,000, without calling for tenders and a \$60,000 property acquisition which was made without a search of title under the express instructions of the chairman. The directors, too, are censured in that "they knew little, if anything, of the market for Ontario cheese in the United Kingdom, or of factors to be considered when pricing cheese in either the export or the domestic market."

The report recommends that "the authority and control presently exercised by the chairman and directors of the Ontario Cheese Producers' Marketing Board be suspended immediately." The report further provides for interim operation and

sweeping changes in the pricing and marketing of cheese.

The Ontario Cream Producers' Marketing Board fares better and is complimented for constructive action in quality improvement. "The board should continue to function without fundamental changes." It is recognized, however, that cream production is economically unattractive and is a declining segment of the dairy industry. Any farmer, now separating cream on the farm, would have the same rights of access as other producers in the event that the proposed Milk Producers' Pool is established.

The Inquiry Committee's findings substantiate the view that the industry, as a whole, has drifted into a piecemeal patchwork, totally inadequate to today's production and marketing requirements. Emphasis is placed upon top-quality milk and the elimination of all milk and milk products of inferior character. It seeks to chart overall policy which will be adequate and flexible for tomorrow's needs. It places financial responsibility with Federal and provincial governments during the difficult period of transition. Beyond that phase the committee clearly wishes the industry to manage its own affairs with a minimum of governmental control; to achieve this it seeks to eliminate outmoded parochial interests and attract high caliber help. In formulating its recommendations it has drawn heavily on experiences in British Columbia, the United States and Great Britain.

Implementation of the recommendations will have to be preceded by new legislation. Because this touches so many people, a refreshing plea is made for clearly drafted and enforceable legislation. The far-reaching changes in milk transportation are recognized; these in turn demand greater concert between Federal and provincial governments and between the provinces, especially Ontario and Quebec.

Some significant areas of the milk industry, such as special breed milk, are not referred to; perhaps these are taken care of in the sections of the report which have not been released. However, there is sufficient documentation in the issued section to stimulate action by the Ontario and Federal governments. ✓

JUST LOOK AT WHAT CROWN LUMBER'S

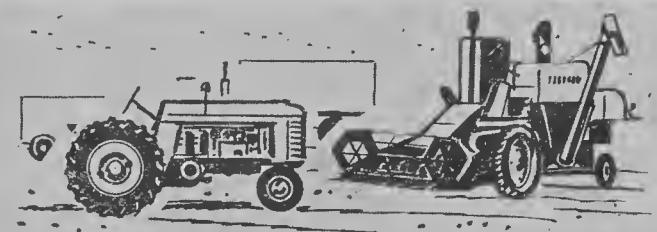
Amazing New

DOME COVERALL

WILL HOLD...



*Enough grain to fill more
than 35 average railway boxcars . . .*



*or complete line of machinery
used on a large-scale farm . . .*



*or a herd of 150 . . .
with room to spare*

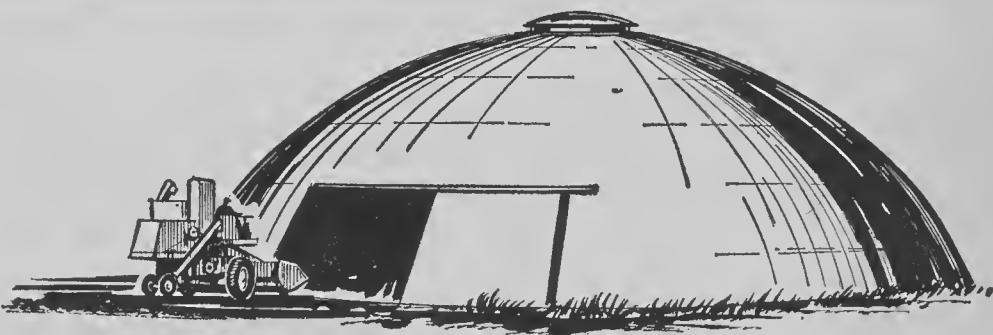
DOME COVERALL

COMPLETE ON YOUR FARM — \$1.25 PER SQ. FT.
F.O.B. CALGARY

Crown Lumber, who brought you AIDS TO AGRICULTURE, now introduces the DOME COVERALL - the most revolutionary farm building in decades.

Ideally suited for grain storage, machine shed or beef loafing barn, it can also be easily adapted for any specialized farm or commercial operation. Whatever the use, Crown Lumber's Dome Coverall provides more efficient, versatile coverage - at far less cost - than average farm buildings.

The aerodynamic shape sheds wind and weather - won't drift, frost or steam up. Fibreglass skylight vent provides abundant fresh air and continuous air flow. Rollaway equipment door allows parking equipment in hitch-up position (canopied door optional).



- Construction complete in 7 days, start to finish
- 80' diameter, 28' high at centre
- 5,028 sq. ft., post-free allowing for easy manipulation of machinery, easy cleaning
- 60,000 bu. grain capacity
- Also available in diameters of 52' (2149 sq. ft.), 67' (3593 sq. ft.) and 100' (7850 sq. ft.)

"AIDS TO AGRICULTURE" HAS COMPLETE DETAILS ON THE DOME COVERALL. ASK YOUR CROWN LUMBERMAN ABOUT IT THIS WEEK. HE CAN ARRANGE FINANCING, TOO!

*. . . or mail this
coupon today!*



**CROWN
LUMBER**
COMPANY LIMITED

DIVISION OF CROWN ZELLERBACH CANADA LIMITED

CG-2

Crown Lumber Company Limited,
Postal Station B, Calgary, Alberta.

Please send me complete details about Crown Lumber's Dome Coverall, and the location of my nearest Crown Lumber branch.

NAME _____

ADDRESS _____

Proposed Use for Dome Coverall _____

THE BUCK STOPPED HERE

(Continued from page 21)

publicity was due to a combination of circumstances. Chief among these was the need for producers who have

been ordered off the market to receive some sort of compensation. A move is under way in the United States to get legislation to reimburse dairymen who got into trouble

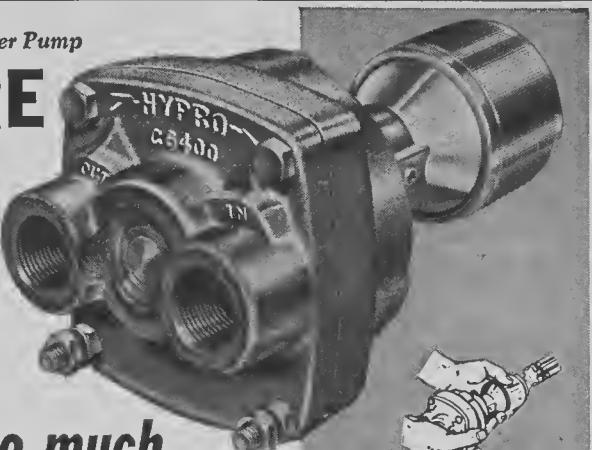
The Hypro Model C6400 Roller Pump

NOWHERE ELSE
*can you get
so much
value in a
pump...or so much
safety in a PTO adapter!*

MORE FOR YOUR MONEY

- The outstanding result of 16 years of roller pump experience
- Rollers precision ground to exact size — NOT tapered — NOT undersize — NOT out-of-round.
- Smoother, quieter operation means longer pump life.
- Every pump tested to 400 lbs. — rated for operation up to 250 lbs. max.
- High density cast-iron housing and rotor, stainless steel shaft, replaceable seals, factory-lubricated ball bearings.

Ask your Hypro dealer or mail this coupon



ON or OFF tractor PTO in seconds, without tools.

Quick Coupler sleeve is round and smooth . . . no bolts or pins . . . nothing to catch on clothing.



JOHN BROOKS & COMPANY LIMITED
255 Hymus Blvd., Pointe Claire, Que.

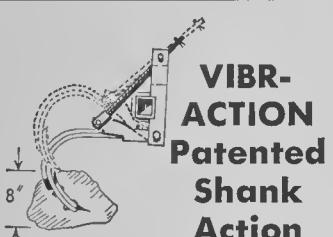
Please send me a catalog of farm pumps.

Print Name _____
Mailing Address _____
Province _____

Glencoe

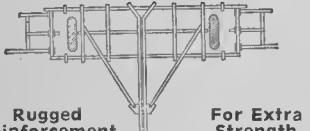
LIVE VIBR-ACTION SHANKS

work through soil fast—
cultivator pulls easier
without drift or bounce



8'
Springs on individually operating shanks are adjustable for tension. Each shank has full 8" obstacle clearance.

Frame Built Like a Bridge



Heavy 2½" square steel tubing with 3/16" wall. 4' deep with 2' clearance between each row of shanks.

Live VIBR-ACTION, the exclusive Glencoe system of independently mounted spring controlled shanks — allows the shanks to work rapidly through any type of soil. The cultivator "tracks true" at controlled depth and pulls easier with minimum drift and bounce. Surface litter flows freely right on through the 4' deep, high clearance frame without clogging. Glencoe increases cultivating speed 20 to 30%, and the level frame with centered wheels inside it ensures even penetration of all shanks regardless of ground contour. Wheeled and 3-point hitch models — full range of widths from 10½' to 18' in Wheeled or Mounted types, from 23½' to 32' in Wing Models, Special Models to 42' wide . . . extendable to suit today's and tomorrow's needs. Write for free literature.

Tapered Roller Bearing Wheel Hubs—Double-weight, heavy duty Clevis—Plated Hardware throughout.



QUE-MAR EQUIPMENT LTD. 124 Labrosse Ave.
Pointe Claire, Que.

GRAIN BELT FARM EQUIPMENT LTD.
1920 - 1st Ave., Regina, Sask.
5301 Quebec Ave., Saskatoon, Sask.

FALCON EQUIPMENT CO. LTD.
299 Danforth Rd.
Scarborough, Ont.

530 First St., London, Ont.

ALLIED FARM EQUIPMENT LTD.
990 Pacific Ave.
Winnipeg 3, Man.

NORTHWEST FARM EQUIPMENT LTD.
Corner of 7th Ave. & 6th St. E., Calgary, Alta.

I4820 - 123rd Ave., Edmonton, Alta.

through no direct actions of their own.

It all began on February 3, when two Grand Forks area milk producers, Lee Hoodle and Ricky DeVries, were cut off as suppliers to the local Sunshine Valley Dairy. When taking random samples of milk delivered on the street in Grand Forks, Food and Drug inspectors found traces of an aldrin-dieldrin complex (aldrin can change to dieldrin in the soil). This has often baffled testers in the past who test for one compound and find another. Tracing back, the inspectors found that the milk came from the Hoodle and DeVries farms. These producers had the choice of keeping their herds and dumping the milk every day for a year or so, or slaughtering their cows and getting replacements. As both of these courses were economically impossible, Hoodle and DeVries faced the prospect of giving up farming for some less troublesome enterprise.

COST IS \$90 A DAY

Said Rick DeVries, who had 69 Holsteins, employs two full-time helpers and has been working 5 years to build up a good purebred herd of young milkers, "Since February 3 it has cost me \$90 a day to feed and milk my cows and dump the milk down the drain."

Lee Hoodle had 64 head of Holsteins, and was milking about 50. During the summer, he shipped as much as 2,300 lb. of milk a day. He is obliged to ship 1,100 lb. a day because he is under quota rules. Lee started dairy farming on his own 2 years ago and still has a good deal of debt to contend with. Both these dairymen have only a month to get back into production or they will lose their quotas.

The cause of the residue was said to be cull potatoes bought from local packing houses. Hoodle had been feeding up to 40 lb. per cow per day, but hadn't fed any for a year because of the present price of potatoes. The trouble with such residues, however, is that they continue to show long after you have stopped feeding them. All crops in the Grand Forks area have been meeting the tolerance requirements for human consumption. What was not foreseen was that there would be a build-up in the animals' systems.

On March 10 of last year, the B.C. Department of Agriculture sent a notice to dairymen warning against feeding cannery wastes. But the damage was done by this time. No warning had been sent to beef and hog men because there had been no record of trouble there. Officials, like everyone else, have been hampered by a lack of research on this subject.

With the milk situation well in hand, Food and Drug inspectors began to wonder what other food producers in the area had been feeding contaminated cull potatoes. A test of meat from the town butcher shop of Peter de Haan revealed that residues have also been building up in hogs and beef cattle. As the shop is supplied from his own feedlot and slaughterhouse on the edge of town, de Haan was faced with the loss of 100 head of beef and 200 hogs.

"It will take me a year to get back in business," said Peter. "Even if I got new stock right away nobody would buy my meat. Once people have had a scare thrown into them it takes them a long time to get over it."

SCARE HEADLINES

A good deal of the "scare" buildup came when one of the principals phoned the "Vancouver Sun" in the hope of getting a bit of action. A request had been made to the B.C. Dept. of Agriculture for some form of compensation so that the affected producers could stay in business, but things seemed to be moving too slowly. The "Sun" did not disappoint them. It got in touch with Food and Drug, and once again public officials learned how easily a phrase such as "significant pesticide levels" can become "dangerous pesticide levels."

Whether this publicity initiated any action is doubtful, but it might have speeded things up a little. The B.C. Minister of Agriculture asked that the Canada Dept. of Agriculture buy the rejected livestock for pesticide research and this request was granted. Dave Young of the CDA Production Service was sent to Grand Forks to handle the transaction. Cattle have now been shipped to experimental stations at Agassiz, B.C., Lethbridge and Manyberries, Alta., and Swift Current, Sask. The hogs went to the Prince George, B.C. station. In all, there were 130 head of dairy cows, 100 head of beef and 200 hogs.

Under present regulations, neither the Federal nor provincial governments are under any obligation to do this. If you don't use pesticides, with care, or make sure that any feeds you buy are safe, you can be put out of business without compensation.

Carelessness on the part of any farmer in your district can ruin your markets, no matter how clean your products are. If the Grand Forks situation proves anything at all it is that everyone has a stake in the safe use of pesticides — most of all the producer.

As far as Ricky DeVries and Lee Hoodle are concerned, they are not yet sure if they are going to be able to stay in business. A lot will depend on what kind of cows they can buy with the money they received, and what they can use for feed. Cull potatoes from the district have been a good feed source. If this source is cut off, milk production might cease to be a profitable business.

"You work 16 hours a day, fight rising costs and then you run into something like this," said DeVries. "It is pretty discouraging."

Certainly making pesticides harder to get is not the whole answer. Anyone who sells forage or feed grain could be made to issue a certificate to the effect that the feed contains only permissible levels of pesticide. This would give the feeder legal grounds for compensation. On the other hand, the feeder could be made responsible to have all his feedstuffs tested. In the light of modern testing techniques, there is one change which must come, most experts agree. Governments will have to abandon their present zero tolerance standard for dairy products. ✓



[Ontario Gov't photo]
It was a long tough winter but we finally made it—it's spring again!

It's Spring



[Guide photo]

Springs brings with it another calf crop and the reminder to dehorn the dairy calves and to vaccinate the heifers



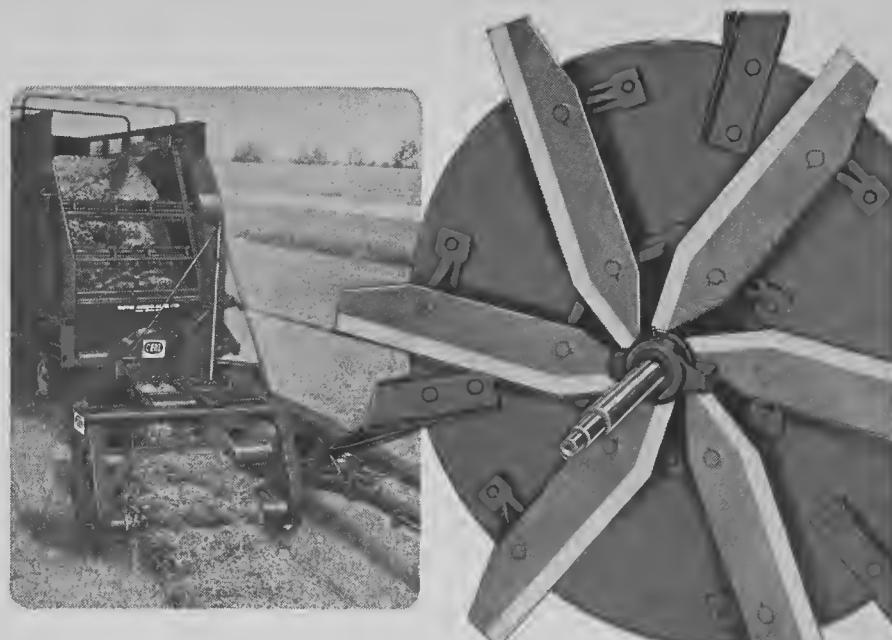
[Guide photo]

Spring is hoof-trimming time; for the lucky ones a hoof-trimming stall, for the rest a rope



[Guide photo]

Sleigh runners are not the most comfortable way for bossy to go to pasture



GEHL flywheel chopping means short chopping!

The sharper the knives, the shorter the cut . . . especially when knives are flywheel mounted for scissors-action chopping. On the Gehl Chop-All:

Chrome-edged knives stay sharp longer . . . turn out more tons of uniformly-short-chopped forage without frequent stops for sharpening.

Tungsten-carbide cutter bar and Gehl knives produce the $\frac{1}{4}$ -inch-short forage that packs tight in silos, reduces spoilage losses.

Select-A-Cut transmission — select short, medium or long forage length by pushing a lever. No wrenches; no sprockets to interchange.

New Easy-Swing drawbar lets you change pulling angles right from the tractor seat with a handy rope control.

Unmatched crop versatility. Attachments equip you for: (1) narrow row corn; (2) high energy corn silage; (3) haylage; (4) sudan hybrids or sudan-sorghums; (5) regular silage crops.

BIG, NEW CHOP-KING... CAPACITY LEADER

In addition, Gehl now offers the new FH-188 Chop-King . . . with capacity that fits any size farm, any tractor horsepower. Short-chops up to 50% more forage per hour than many other forage harvesters. Features: 8-knife flywheel; 127 sq. in. throat area; floating heads; "telescoping" U-joint; Select-A-Cut transmission and Easy-Swing drawbar. Available in pull-type, and all-new self-propelled models.

Need more proof? Ask your Gehl dealer why the Gehl chopper line outsells all other forage harvesters.

Make us Prove it with a Demonstration!



WHERE QUALITY IS A FAMILY TRADITION

22-65C

**GEHL BROS. MANUFACTURING CO.
Dept. FR-79-22 West Bend, Wisconsin**

Please send more information on the:

Gehl Chop-All Gehl Chop-King

I am a student.

Name _____

Route _____ City _____

Province _____

If your dealer isn't handling Gehl, have him contact one of these distributors:

QUE-MAR EQUIPMENT CO., 124 Ave. Labrosse, Pointe Claire, Quebec
GEHL BROS. MFG. CO., c/o James A. Murphy, 32 Paulart Drive, Islinton, Ontario
GRAIN BELT FARM EQUIP. LTD., 1920 First Avenue, Regina, Saskatchewan
NORTHWEST FARM EQUIPMENT LTD., Corner 7th Ave. & 6th St., East Calgary, Alberta
ALLIED FARM EQUIP. LTD., 980 Pacific Ave., Winnipeg, Manitoba

BE READY BY ORDERING NOW!

DOUBLE ACTING • HEAVY DUTY HOISTS • 2 YEAR GUARANTEE

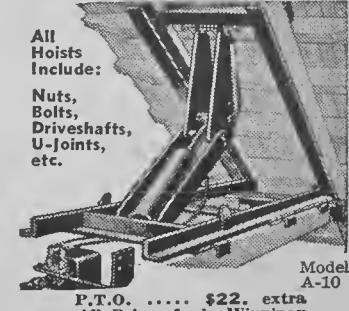
- MODEL A-10 — 10-Ton capacity. Hard steel shafting throughout. Top Quality 5" cylinder — 2-Piston Pump. Double Acting \$199 (as illustrated). SPECIAL
- MODEL C-10 — Same as A-10 but with 6" channel iron upper sills. Double Acting. SPECIAL \$219
- MODEL HC-12 — H.D. high lift for 102" cab to axle, up to 16' boxes. 7" channel iron upper sills, high volume 4-Piston Pump. SPECIAL \$279

OTHER MODELS AVAILABLE

3/4 & 1 ton. Also High Lift models (up to 54" — 12 to 20 ton) twin & single cylinder. Write for FREE LITERATURE.

MIDLAND OF CANADA

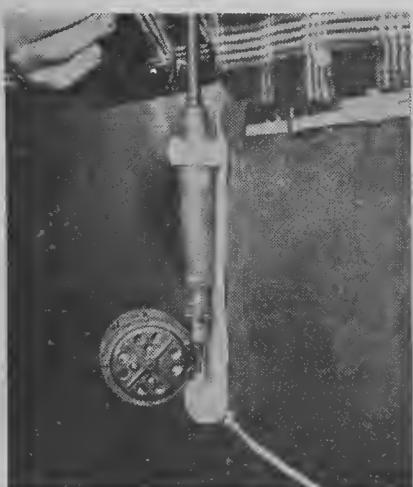
642 Notre Dame Ave. Phone 775-3943 Winnipeg, Man.



P.T.O. \$22. extra
All Prices f.o.b. Winnipeg

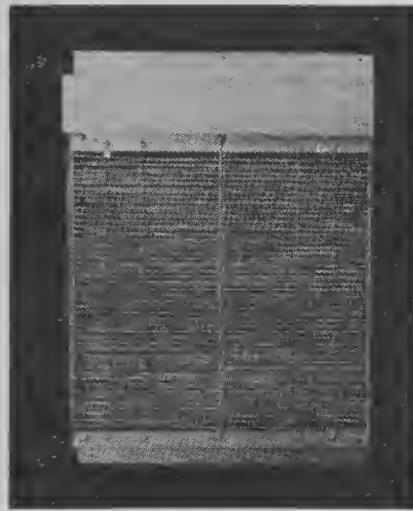
What's New

Fish Rod Holder



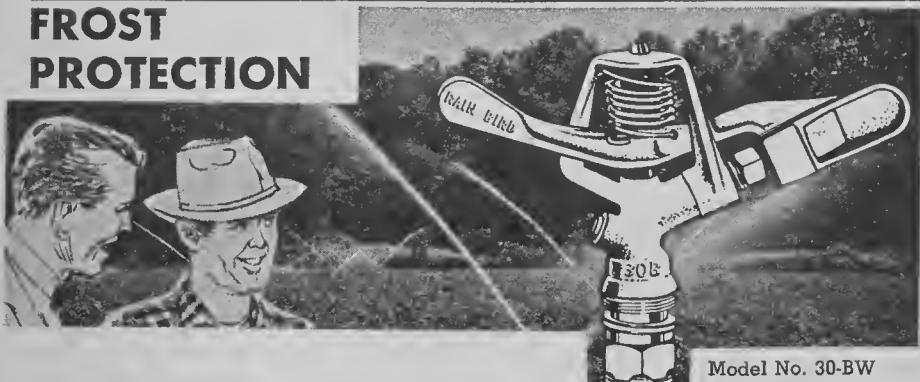
Described as a third hand for fishermen, this fish rod holder is designed to fasten over the fisherman's belt and hold the rod, leaving both hands free to change lures, leaders or flies. The holder is made of colored plastic and is said to float if dropped. (Blakely Enterprises) (526) V

Electric Insect Control



This product is designed to kill insects by electrocution on an electrically charged grid. The electricity is said to be well below a safe level for humans. Different types of this product are designed for use in doors and windows or at strategic locations in outdoor areas where fly control is a problem. (Zeropest Products Limited) (527) V

FROST PROTECTION



RAIN BIRD SPRINKLERS . . .

PROTECT against Spring and Fall frosts as low as 23°F. with RAIN BIRD Sprinklers on a solid-set system.

RAIN BIRD SPRINKLER MFG. CO. (Canada) LTD.

Vancouver 4, B.C.

Corrugated Roofing Rolls



This corrugated roofing is designed to be rolled into place, stretched, and nailed to nailer strips. A printed lap guide and scored nailing groove is provided to speed lap alignment and nailing. The roofing is designed to arch slightly when it is nailed down, giving greater roof strength. (The Ceco Corp.) (528) V

Pavement Patching



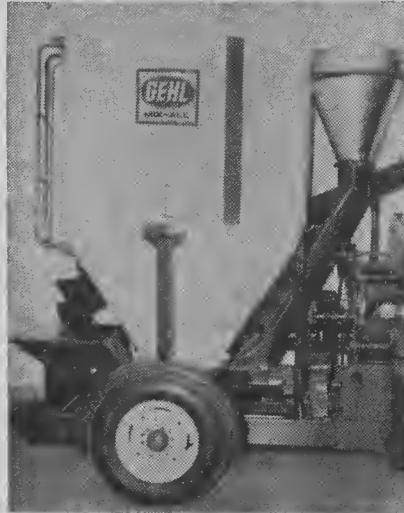
The manufacturer of this patching material for chuck holes in pavement states that it is easily applied by unskilled labor on wet cold surfaces in any weather. Merely shovel into the hole and tamp down. (Consolidated Paint and Varnish Canada Limited) (529) V

This new fabric for covering poultry house windows is woven of polypropylene yarn and is said to be resistant to yellowing, shrinkage, rot or mildew and tearing. It also is designed to allow proper air circulation. (Eastman Chemical) (530) V

Fabric Poultry Screen

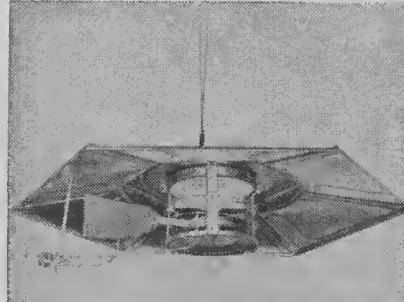


Fiberglas Feed Mixing Tank



This optional fiberglas mixing tank is intended to resist rusting, denting and corrodng. The color is molded in to eliminate painting and the fiberglas is said to provide better insulation, reducing condensation when the unit is used as a temporary feed storage. The use of fiberglas reduces the weight to one-quarter of standard steel tanks. (Gehl Brothers Manufacturing Co.) (531) V

Poultry Brooder



This gas brooder features a dust-proof, non-backflash design. Air entering the burner is filtered through a detachable dust filter screen. The design of the burner is intended to prevent backflash. A new one-piece ceramic radiant with molded-on cones is intended to increase infrared radiation by 20 per cent. (H. D. Hudson Manufacturing Co.) (532) V

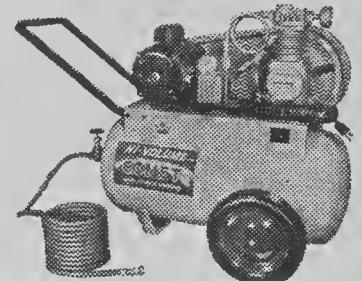
APPLICATION rates of as low as 0.09 inches of water per hour provide a protective fog over your tender crops with a RAIN BIRD-engineered frost protection system.

For further information about any item mentioned in "What's New," write to WHAT'S NEW, Country Guide, 1760 Ellice Ave., Winnipeg 21, Man. Please quote the key number that is shown at the end of each item.

NO INVESTMENT *



Comet Drill-Fil: Lets your back rest. Keeps your limbs whole. New improved Hi-Torque 12-volt motor moves grain faster and gives 60% more power. Full governor. Practical, fast, effortless, low cost. A modern-farm necessity. Fill in coupon today.



Comet Hi-Volume Air Compressor: Has that extra stamina to perform 20 different farm operations. Double pumping capacity. 137% pressure-storage. Even with only 10 tires, you need it now. You are paying for it already. Why be without a Hi-Volume Compressor when it's so low priced and has so many "labor-saving" and "can't-be-done-any-other-way" uses? It works for you day by day.



Become an **SR**
'Spare Time' Agent!
FREE FACTORY
SUPERVISED TRAINING
in Guelph or Saskatoon
(Also Correspondence)

Clem Roles, Pres.
Smith-Roles Ltd.

Increase your farm income as an SR FARMER AGENT! Demonstrate and sell the complete line of COMET products locally in your spare time. WELDERS, COMPRESSORS, GRINDERS, POST-HOLE AUGERS, BIRD SCARE CANNONS . . . OVER 150 different items. Mail the coupon below for complete details.

Please send me details on:

- 'Better Arc Welding' Book \$3.45 plus tax
- H.D. 180 Comet Welder
- H.D. 300 Comet Welder
- Hi-Volume Compressor
- Comet Metal Slicer Grinder
- Comet Drill-Fil
- Econo 180 Comet Welder
- Comet Fast Charger
- Bird Scare Cannon
- Comet Portable Electric Auger
- Part time FARMER-AGENT Plan

Name

Address

SMITH-ROLES, Saskatoon

A HANDFUL OF STARS

*Some gardens can be launching sites
for flights into space*

I STOPPED my truck at the hole in the hedge and, sure enough, there was Jim's pipe, sending lazy smoke up under the stars. The swing creaked as he moved over. I could hear the fountain trickling over the lily pads. Which reminded me it had hit 90 today in the shade.

Jim called out, "Evening, Hal." His pipe stem motioned me toward the canvas swing.

I sat down and looked around the little rock garden where Jim and I have spent a lot of hours. "Jim," I said, "I've been thinking. I want to make me a garden just like this one. I came by to find out what you put in it."

"Well, now," Jim said, sounding pleased, "a rock garden's no big project. Get yourself some dirt, a few rocks, some plants, and bend your back a little."

I kicked off my slippers and stretched out my legs. I had been down to the corner market, after a full day's pruning and spraying. I felt a trifle bushed. "I know about

time's up. Let your mind reach up there and grab yourself a handful of stars."

AT FIRST it was hard to do. When you take your mind off the earth, what do you think about? No, let the roots reach out and find whatever is up there. I'm on a space flight, I told myself. Except I wouldn't have to be bothered with dials and pressures and gauges and walkie-talkie.

I could still hear earth sounds. Jim's pipe had a wheeze. But it pleased him. The fountain, tinkling. Up. Stars and wheeling planets. What is the dark blue made of? "The Lord is thy shade upon thy right hand." I was surprised to learn that I still remembered that.

My eyes were open. I was trying to see. I felt as if I were riding a magic carpet. But the carpet had a slow takeoff. Fireflies and distant honking horns and earth sounds kept jerking me back. But I kept my eyes turned up. My head

by KERMIT SHELBY

the plants, Jim. What I want is the feeling I get when I sit in your rock garden."

"Yeah?" Jim was silent for a moment. "Like what?"

I put my feet down and wriggled my toes in the dew-sprinkled grass. "Whatever it is, why do I have to drive by here and borrow it from you?"

Jim laughed, pleased, as the swing creaked. Fireflies sparkled in the cedar bushes, then turned their lanterns off. Saving fuel, probably.

"You ever hear tell of the inspiration called silence?" Jim asked me.

"What do you mean?"

"Try it. Just sit. See that old oak, Hal? Okay, pretend you're it. Put your roots down and let them suck up the earth's strength."

"Yeah." I wriggled my toes deeper. But I had the feeling Jim meant something else. A stream of flashing lights on the highway cut through the night. "But your mind . . ."

"Mind roots," Jim said. "Tree roots go down. Mind roots grow up." He waved toward the stars. "Up, Hal."

I became aware of the Big Dipper. The Milkmaid's Path. But I kept thinking how, behind them, space men were trying to find the moon in person. "Have you heard how that new astronaut is making out?"

"There you go. Do me a favor, Hal. Sit still five minutes and don't say a word. I'll tell you when your

rested on the padded back of the swing.

It looked like a big blue lake. A lake with India ink spilled in it, like that bottle I spilled one day in school . . . Twelve years old. The spilled ink was behind me now. School was out yesterday. There I was, following a path through the windswept wheat. The kids would be waiting beside the swimming hole where I'd promised to meet them. Hurry.

In a twinkling I was there. Naked. June sun spread hot on my back. Unless you jump in the water quick you'll blister. Going down past the seaweed thing I felt water rushing into my ears. The sand washed liquid under my feet. "Hey, look what I can do!" You had to make a fast getaway or the old diving board would jump up and spank you. Later, with red-rimmed eyes and sun-thatched hair, "Say, there's a tree of ripe cherries over at Uncle Frank's orchard."

The floating carpet took me anywhere I wanted to go, faster than space flight. The Caribbean. Alaska. Sumatra. I traded them all for a dusty village street where we loaded watermelons long ago in a straw-lined boxcar. The watermelons were sweet and hot. We traded a big one to the man in the ice cream parlor for half-a-case of cold soda pop. The strawberry and the lime ones were mine.

Years and miles were skipped, helter-skelter. That music I heard came from



the county fair's merry-go-round. It was dusk. Marie's parents had just met new friends where they lingered about the livestock pens, talking shop. I said boldly to Marie, "Will

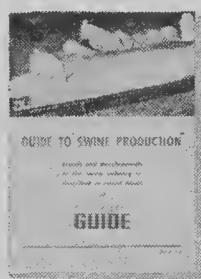
Guides to better farming . . .

New 36-Page Guide-Books on Livestock Production

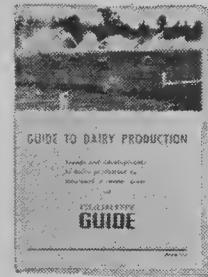
The articles in each of these new 36-page guide-books have been carefully selected from editorial features in recent issues of COUNTRY GUIDE. Handy and well illustrated, each guide-book has varied and useful information you will want to keep for reference.



**Guide
to
Beef
Production**
50¢



**Guide
to
Swine
Production**
50¢



**Guide
to
Dairy
Production**
50¢

Especially for the Ladies . . .

We offer 36 pages of the more popular patterns recently offered in COUNTRY GUIDE. Complete instructions are given for knitwear, doilies, edgings and novelties. A must for those who enjoy handiwork.



**Guide . . .
Needlework
Designs**
50¢

Fill Out Coupon and Send Today

COUNTRY GUIDE
1760 Ellice Avenue
Winnipeg 21, Man.

Please send me the guide-books I have indicated at 50¢ each.

- Guide to Beef Production
- Guide to Swine Production
- Guide to Dairy Production
- Guide . . . Needlework Designs

I enclose _____ as payment

Name _____

Address _____

OR:

Please renew my subscription for 3 years and send me one of the guide-books indicated above absolutely free. I enclose \$2.

you ride with me on the roller coaster?"

Her intake of breath was pretty shaky. "They say it's dangerous."

"Not if you hold onto somebody tight." I could feel her hand on my arm, light but oh-so-much-there, as I bought the tickets. There were stars that night, too.

SOME FOLKS might call it mind wandering. But you know better. It's mind voyage. To the places you have enjoyed most. I no longer thought, I felt. There's such a difference! My mind reached out and up, revealing the things it had grown on. Its soil was memory. Impressions that sank in and went deep.

An earth voice shattered my flight. "Okay, your five minutes is up." My flying carpet crumpled. Instead, it became the canvas swing. Why, there's dew falling! My toes searched the wet grass, locating my slippers.

Jim knocked the ashes from his pipe. His tone was dry. "Want to talk about it?"

I shook my head. "No, Jim." "Good for you."

As I drove slowly home I realized it had been a long while since I had taken time out for "just thinking."

When I carried in the groceries my wife said, "You forgot the catsup. Did you find out what to put in your garden?"

"Yes. I found out."

I turned out the light and looked out the window. There was the big dark waiting, like a friend. The Big Dipper. The Milkmaid's Path. The works.

"Step here a minute, Marie," I called. "Help me look at the stars."

I could hear the swish-swish of her mop from the kitchen. "I've seen the stars, Hal. I have to finish the linoleum."

"Let it wait."

Marie turned out the kitchen light. I felt her reaching hands. "What's the big deal?"

"Don't say a word for ten minutes. Just stand still and look at the stars."

Marie moved in closer. And together, we looked at the stars. ✓

Buried Treasure

For a boy in the Spring there is nothing so sweet
As the marvelous feel of fresh soil 'neath his feet.
The smell of moist earth as it's turned by the plow,
Lets one nearly touch heaven as God can allow.

The clean ribboned slices turned up to the sun
Announce the rebirth of nature's begun.

Keep an eye on the furrows boys," Dad always said,
"You might find an Indian arrowhead."

So round after round we would tag behind,
Peering and hoping a treasure to find.

Most of the arrowheads stayed in the ground,
But you just should have seen the nice worms that we found!

—EILEENE R. ROSE.

Let's Think It Over

by THE VERY REV. M. L. GOODMAN

Wanted

Our real worth is not established in dollars, or in beauty, or in usefulness but in the fact that God loves us. It is this love "so amazing, so divine" that demands our lives, our soul, our all. It is this love that claims our love, calling from us the response of our hearts in devotion and obedience.

One of the ways in which this worthiness is set forth is in the fact that God says "come." You don't invite people that you don't want. Well, perhaps you and I might but God wouldn't. In His Creation, through all time, there echoes a great cry: "Come ye blessed of my Father, inherit the kingdom prepared for you from the foundation of the world."

"Come unto me all ye that travail and are heavy laden and I will give you rest."

"If any man thirst let him come unto me and drink."

This is why we dare to come to God at all — because we're invited. We do not deserve to come, nor could we earn the invitation.

God's invitation has come to us, not because He owes us anything, not just because He has created us and must go through with a project which seems to be turning out rather badly (that is no surprise to Him — He foresaw it), but simply because He wants us.

This is our worth — God wants us. He wants you and He wants me. It's beyond our comprehension how much we're worth to Him.

Suggested Scripture: St. John XV, verses 11-19.

Resurrection

"The flowers appear on the earth, the time of the singing of birds is come, and the voice of the turtle is heard in the land." (The Song of Songs)

There are not many flowers yet, but the winter is past. There may be flurries of bad weather, and it will be some time before we can let the fires go out; but it is spring.

When I was a boy the early spring meant the joys of sailing boats in the puddles and wet feet. There is also the memory of Easter eggs, not the kind you buy, but the ones you boil and color yourself. From later in the season comes the recollection of flowers and pollywogs and the dry green fields, the lightness of the year's first running shoes and the freedom from heavy clothes.

Now, I'm ashamed to say, one of my first impressions of spring is that it's impossible to keep my windshield clean!

So time passes and our reactions change. There are surely things that God wants all of us to notice about spring. When we stand out of the wind, against a wall warmed by the sun, the warmth seems to soak into every part of our being. Here is a physical experience of something that can happen spiritually when we open our lives to God and let Him come right in.

There is life in the very air of spring. Like the rainbow of the book of Genesis, the returning spring is a kind of promise of God. It is part of His covenant of life after death. In His mercy He shows us the truth about Himself clothed in the material things we know. Just a slightly different tilt to the earth's axis and there'd be no spring. It would be either so hot or so cold that nothing could exist.

God has arranged it as it is. He has given us spring and life and the assurance of a greater life whose fullness is yet to be.

Suggested Scripture: St. Luke XXIV.

Doing Your Share?

Friends recently showed me a copy of the magazine of their old parish in England, a place named Eastridge. We chuckled over the following paragraph: "In 1698 the Reverend Dru-Asly Cressener was inducted as Vicar. He is chiefly remembered for having written in the parish register as follows: 'Inducted Dec. 11, 1698 among the savages of Eastridge, who used my good predecessor almost as ill as myself, but Death in a little time gave him a Happy Deliverance.' The plain spoken vicar must later have changed his opinion of his parishioners for he presented the church with a fine set of communion vessels which is being used to this day. On their part, they erected a memorial to him which still stands in the church.

The bond between parson and people does become a very strong one, a "mystical" union. It depends on mutual trust and sympathy. Happy is the parson whose people pray for him. I must say how blessed I have been in my own relationships in the four parishes where it has been my privilege to serve.

No one would dare tackle the ministry without a strong faith. But, as well as believing in God, you must also believe in people, and you hope that the people will believe in you.

Pastoral leadership involves heavy burdens and responsibilities, but the work to be done is the responsibility of all people of God. The minister must not be left to do it alone while his flock stand by to observe and comment on his success or lack of it.

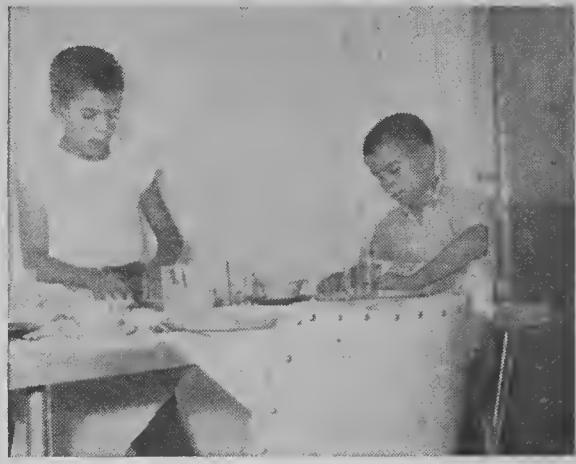
Suggested Scripture: Galatians VI, verses 1-10.





[Guide photos]

*At play
or
at chores
there's someone
to do it with*



In a Big Family

by GWEN LESLIE

THE TOM DESLIPES may never field a softball team, but they have the numbers to do it! Theirs is a family of ten. The eldest of their eight children is 11, the youngest 8 months.

The Deslippes are raising their children in a team spirit, too, in a home in which the children share alike in pleasures and chores. The older ones take particular pleasure in helping to take care of the younger members of the family.

"It's a job they just love," Louise explained when Ricky, 9, asked to give the baby his bottle. "They'd much sooner do this than any of their other household chores such as dishes." Baby David is the first one Ricky has done much for, Mrs. Deslippe added. Brother Tommy looked after 18-month-old Cathy from the time she came home from the hospital. "For a while Cathy would go to him before she'd come to me," she recalled.

As the eldest, Danny is the most experienced in the handling of younger brothers and sisters. "Danny feels now that he'd rather be out on the farm," his mother said. "But he learned to bake and still likes to do that, and the children love his cookies and cakes — however they turn out."

His mother is sympathetic to Danny's desire to be out and about on the farm. She used to help out herself with the tomatoes and turkeys; now she limits her farm work to keeping the accounts for these operations and for the 75-head herd of Holstein cattle Tom keeps on their 500 acres in the southwest corner of Ontario's Essex County. Tom's father is semi-retired now. When she has hired help in the house, Louise goes to the farm

office on Tom's dad's farmstead to work on the accounts. When she's without help, as she was when I called on her, she does her bookkeeping at home. A second telephone, installed in the house for farm business, keeps her in touch with what's going on anyway.

With such active parents, it's natural the children should learn early to take their part, and do their chores with willing good humor. There's much to be done for a large family, yet a visitor to the Deslippe home meets with unhurried hospitality. The day before I called in, Louise had entertained 27 to dinner following the christening of baby David, then 3 weeks old.

How does she manage? The children's help is a major factor. Another is the convenience of the home the Deslippes built to meet the special needs of their large family.

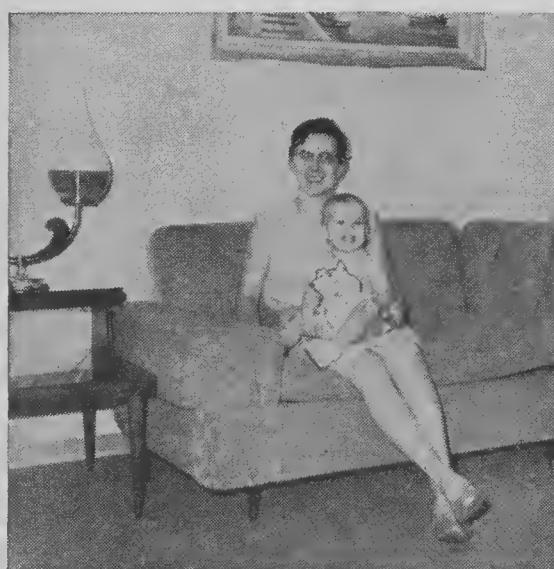
After searching through magazines of house plans, and visiting model homes, Louise and Tom took a list of the features they favored to an architect. Their satisfaction with their house proves you don't need a house of large dimensions for a big family. It's 48 ft. by 32 ft., an economical storey-and-a-half located far enough from the center of farm operations for young children to be safe from machinery hazard. In good weather, the children can play outdoors on 3 acres of surrounding lawn without strict supervision. In less favorable weather, they enjoy the sheltered playspace of the recreation room finished in the basement. This recreation room is a real satisfaction to Louise, who says: "We don't have toys scattered about upstairs. And the children have their own television set down there, so Tom and I don't have to watch cartoons."

When the Deslippes planned and built their house they had just six children. Now it houses eight. A novel dormitory sleeping plan for the upper half-storey absorbs newcomers easily. To create the so-called dormitories, the upper level was divided into two large rooms separated by a bathroom and small hall. The four eldest boys share one dormitory bedroom. Suzie 6, and Annette, 4, share the second.

Sharing is perhaps one of the first things children in a large family learn. The Deslippe family share sleeping space, chores and playtime — and another asset as well. They share the happy optimism of a winning team. V

Home and Family

Some chores are more popular than others . . .



The Deslippe house (r.) isn't large, but it is livable. Mrs. Deslippe, shown holding Cathy, 1, chose nylon carpeting to stand up to hard wear



Baby David is Ricky's special charge



Shrubs and flowers enclose the patio of the Wayne Anderson home at Bow Island, Alta.



Aramenta uses Elkhorn sumac lavishly in her plantings for several reasons, among them its burnished red color, interesting shape and ease with which it can be propagated. She started with just the one small cutting given to her by a neighbor

A softly curving driveway with a velvet-like lawn on one side and flowers and shrubs on the other lures visitors into the farmstead. The Andersons built the brick pillars



Aramenta Anderson

House for Outdoor Living . . .

by ELVA FLETCHER
Home Editor

IN APRIL, Aramenta Anderson's thoughts turn to the outdoors again, to the barbecued meals she'll soon be serving on the patio extending from their farmhouse, to the shrubs and trees that surround the patio and give it an almost tropical appearance, to the garden and the 300 tulips soon to burst into a blaze of color.

For since the Andersons arrived at their Bow Island, Alta., farm in 1953, they have renovated and enlarged the old farm home and landscaped the grounds around it. Now the farmstead is an oasis in the heart of Alberta's windswept southland. In that oasis, the Anderson family take time to enjoy outdoor living.

When they took over the Spruce Grove Farm, the farmhouse was a small, square frame building surrounded on three sides by the 3-year-old evergreen planting that gave the farm its name. They extended the house with a 66-foot addition across the front and gave it a T-shape.

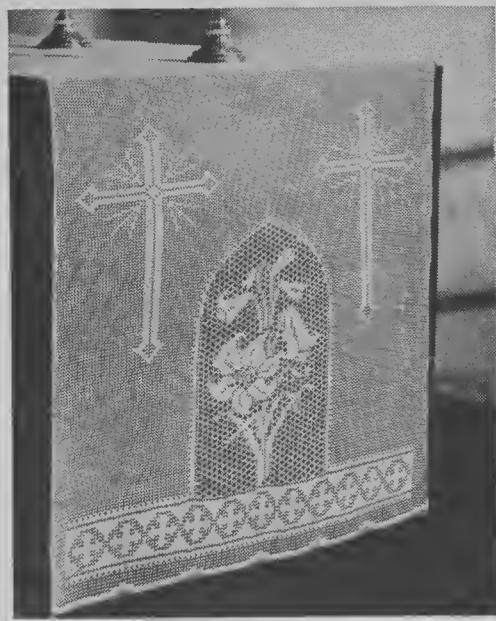
The addition gave the Andersons a lot more living space. For example, it gave them an entrance hall, a large living room and master bedroom. A small step up into the dining room indicates the east wall of the original house. One bedroom on the north became the farm office; the other, son Randy's quarters. Beyond the dining room are kitchen and utility room.

Wayne and Aramenta worked out the house plan between them. Wayne did the building and interior finishing with some outside help; Aramenta planned the interior decoration.

It's a pleasant, peaceful home, reflecting Aramenta's artistic skills. For example, a ceiling-high brick fireplace with a raised hearth separates living room and front entrance. At night time, a handmade hanging hall lamp — one of Aramenta's own creations — casts a soft glow.

There are many other artistic touches throughout the Anderson home. For one thing, on an old-fashioned 5-panel door in one room, Aramenta used strips of the wallpaper used in the room within each of the five panels. She decorated the even smaller panels in another old door with cutouts from the wallpaper in that room. Even the utility room shows her artistic skill. For the wall in the recess housing washer and dryer, she made shadow box frames. Inside each are cutouts from the wallpaper in that area. "I thought they could be changed when I change the wallpaper," she pointed out.

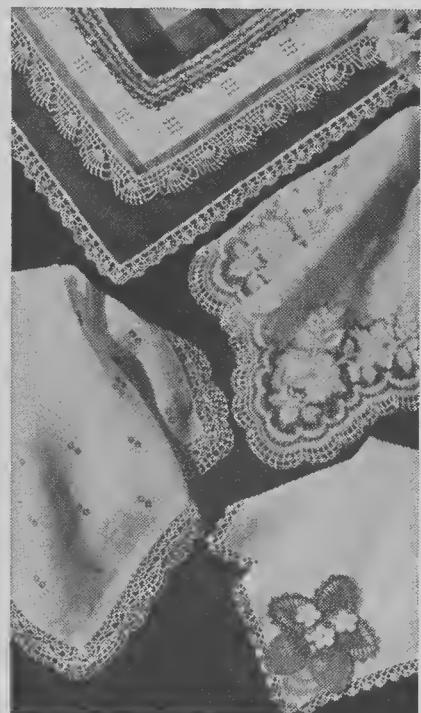
There are other interesting ideas, equally adaptable to other homes. Among them are the softly scalloped frame around the papered part of the bathroom wall; the peg board covering one of the old 5-panel doors for the family's collection of ribbons; the magazine rack hanging on the back of one door in the farm office.



Order Leaflet No. C-8741, 10¢, for diagrammed crochet instructions for the altar cloth panel design shown at left. The panel is 36" deep.

HANDICRAFTS

The tatted trim on the lampshade at right was handmade from pattern instructions; Leaflet No. T-8698, 10¢



Order Leaflet No. S-665, 10¢, for crochet instructions for the six decorative edgings pictured at left.



The tatted trim adds a feminine touch to the blouse pictured above. For detailed tatting instructions for the trim, order Leaflet No. T-7971, price 10¢.

For handicraft patterns pictured above please address your order to
Country Guide Needlework Dept., 1760 Ellice Ave., Winnipeg 21, Man.

what a difference a day makes

**muttart
farm
homes
for '65**

What a difference a day makes — when you deal with MUTTARTS. In 8 hours you can have a house closed in. A farmer's time is valuable. That's why he appreciates the quick and easy assembly of MUTTARTS precisely pre-built homes.

MUTTARTS offer 35 well designed, functional homes, planned to be the efficient control centre for today's modern farm. Only quality material is used yet cost is surprisingly low. Find out what a difference MUTTART HOMES can make in your life. Write for the free booklet from MUTTARTS — Canadian leader in manufactured homes.

**MAIL
COUPON
TODAY**

MUTTART HOMES
10930 - 84 St., Edmonton, Alberta
Name.....
Address.....
Phone..... CG-4/18



Your old
fur coat can
become a
glamorous
Furliner
for only
\$149⁰⁰

Join the throngs of fashion-conscious women who have turned their old fur coats into a beautifully styled, glamorous "furliner!"

Your old discarded fur becomes the lining of a fashionable cloth coat. Beautiful styles in a wide range of cloths and colors. Warmth and beauty at remarkable low cost.

For complete details on this outstanding fashion first, including fabric and color samples, mail the coupon today!

Yes, I am interested in further details on your fabulous "furliner." Please send me complete details—no obligation.

NAME _____
ADDRESS _____
CITY _____ PROV. _____

**Kolchin & Boxer
FUR COMPANY LTD.**
396 PORTAGE AVE, WINNIPEG, MAN.
PHONE 943-4576

BACKACHE
Due to faulty
elimination can be relieved
overnight with the help of
K & L PILLS
CUTS
BURNS

Be prepared with safe first aid that brings fast relief...keep your medicine cabinet stocked with

DR. CHASE'S
Antiseptic OINTMENT

University of Alberta
BANFF SCHOOL OF FINE ARTS
33rd Summer—June 17 to September 11
Courses in: Music (including Instrumental Workshops), Painting, Theatre Arts & Musical Theatre, Crafts, Ballet, French, Figure Skating, Writing, Photography. For Calendar, write: Director, Banff School of Fine Arts, Banff, Alberta.

Help your family to foot health by checking shoe construction, material and fit before you buy

Your Children's Shoes

ONE-QUARTER of all the bones in the body are in the feet. A child's foot, at birth, is relatively unformed—about 50 per cent rubbery cartilage with the arches held in place by fatty pads. It takes 10 years for the general foot structure to develop, 20 years for full growth.

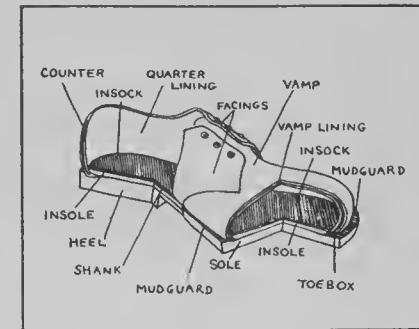
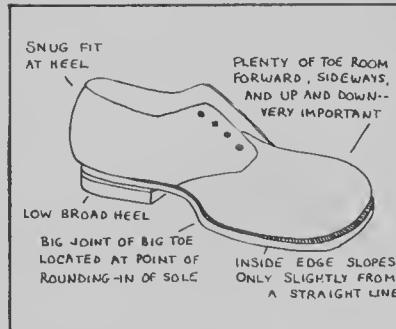
During childhood the small muscles and bony structures warp easily, and can quickly be damaged by ill-fitting shoes and stockings. For example, doctors have found that stretch socks, leotards, stretch sleepers and even blankets stretched tightly over a baby's feet in a crib can cause deformities in children's feet. The proportion of children with foot ills increases from a small 8 per cent at 1 year to 41 per cent at 5 and to an alarming 80 per cent at high school age.

What Kind of Shoes and When

Except for warmth, a baby does not need any covering of his feet until he starts to stand. His first boots should be made of soft pliable leather, with soft non-slip soles. When the child begins to walk, the shoe soles should be firmer, but still flexible, with room so that the toes are not constricted in any way. Ideally, the shoe should be $\frac{1}{2}$ " to $\frac{3}{4}$ " longer and $\frac{1}{4}$ " to $\frac{1}{2}$ " wider than the foot, with no protruding inside seams. A laced shoe is best for infants and children. An active youngster takes 30,000 steps daily, and a flimsy party shoe or canvas sneaker does not give adequate instep and heel tendon support. Party shoes tend to end up as school shoes, and by this time they do not fit. Foot disabilities appear gradually, as children are unaware of ill-fitting shoes because of the softness of their bones.

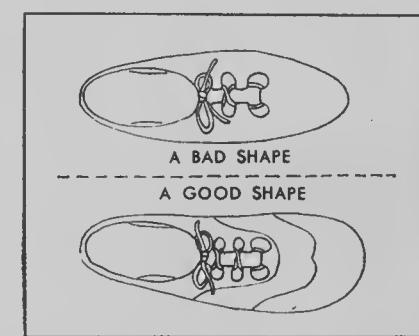
Shoe Construction

Children's shoes, unless strongly made, are likely to "run over" easily. The sole, shank, heel counter and toe box should all be strong, but not stiff. (The shank of a shoe is concealed in the shoe—it comes under and supports the arch of the foot.) The shank should be flexible enough to exercise the muscles in walking—preferably spring steel and thick enough and wide enough to give good support. The shank should be long enough to extend from a point close to the heel to another point almost at the ball of the foot. The counter of the shoe (the back part of the upper, at the heel) supports the upper and should be firm yet resilient, rather than soft or stiff. Select a shoe with a straight inner line, a low broad heel and a roomy toe.



Availability

A good shoe retailer is as important as a family doctor or dentist. Choose a reliable dealer who is experienced in fitting children's shoes and will check to see if new shoes are needed. There are 144 different size ranges for one basic shoe style, so you can see how difficult it is for every retailer to stock every shoe in every size range. Size classifications are: Infants' (sizes 0-8), Children's (sizes 8½-12), Misses' (12½-4), Growing Girls' and Women's (4 and up), Youths' (12½-4), Boys' (4½-7), and Men's (7½ and up).



varyations in the basic oxford style to attract teen-age girls into wearing correct shoes for school.

Checks for Fit

Shoes should be replaced when the distance from the tip of the longest toe to the tip of the shoe is $\frac{1}{4}$ " or less, or when there is any other sign that the shoe is not a good fit (heel blisters for instance, or beginning of callouses, or incorrect walking). Don't depend on the child to tell if shoes fit. A child from 1 to 6 years old will probably need new shoes about every 1 - 2 months; from 6 to 10 years, every 2 - 3 months; from 10 to 12, every 3 - 4 months; from 12 to 15, every 4 - 5 months; and at 15 years and over, every 6 months.

With each foot bearing weight, and with toes carefully straightened, the child's feet should be measured individually for length, width and thickness through the arch. Shoes should be fitted to the larger of the child's feet. Correct length for a new shoe allows $\frac{3}{4}$ " - 1" from the longest toe to the end of the shoe. Leather should not appear stretched over the child's foot. To check this, have your child stand and then pinch the leather over the widest part of the shoe. There should be enough to allow a little to be picked up between the thumb and forefinger.

Tips on Choice and Care

Don't let your child choose his own shoes—insist on correct fit and good style. Take advantage of the many attractive colors and other

Distress Due To "Being A Woman" Relieved In Most Test Cases!

Remarkable tablet can bring blessed relief from distress of hot flashes during change-of-life . . . from awful monthly cramps of younger women too!

The idea that most women must suffer distress at certain times—just because they're women—is not accepted today. In hundreds of cases, young women got striking relief from monthly cramps by taking Pinkham Tablets . . . while women going through change-of-life got relief from hot flashes, irritability. Pinkham Tablets also help older women with their blood-building iron. So don't endure monthly discomfort or misery of change-of-life. Ask for Lydia E. Pinkham Tablets at drug counters.

Prefer a Liquid? Druggists also have Lydia E. Pinkham Vegetable Compound.

YOUNG PEOPLE

How Do You Study?

by KAY LAMBERT

"WHAT IS THE best way for you to study? Have you any ideas to pass on to other students?" These were the questions I recently put to a group of high school students.

Expressive grunts, groans and grimaces usually accompanied the replies I received.

"I cram," said one frankly, when I asked how he studied.

"I have to make lists," a commercial student said. "I list each subject and the day I should study it. Chewing gum helps too," she added with a grin.

Other study aids beside the gum, included a cardboard box, two card-tables, a radio and snacks.

"I eat all the time," Mary admitted, "or bite on the end of a pen." Her marks proved this system worked well for her!

The basis for most pupils' study habits is the advice offered by principals, teachers and parents. However, most students alter these rules to suit their own needs. In the variety of ideas that follow—the result of my questioning—you will find some only amuse. Others may prove useful aids in your own struggle to absorb knowledge.

"I have to pace back and forth," John said. "I read some notes and then walk up and down fixing them in my mind. When I asked for a large cardboard box, Mom had great hopes I'd use it to take the junk out of my room. But I found it more helpful as a study aid. On the top of my desk, it raised my book to eye level as I paced back and forth."

Another student who made excellent marks in Grade 12, has a basement study room. Several weeks before examinations he sets up two tables in addition to his desk. On each surface he lays out the notes and texts of one subject. He makes excellent progress by allowing himself one hour on one subject and then moving directly to another.

"Oh, I couldn't do that," gasped Beth, when she learned of this method. "I just do one subject at a time. I guess I'm lazy but it seems to help if I sit up to read my notes and then lie down to go over the material. If Mom's available she helps by asking questions."

"My family dreads examinations," Keith confessed. "I have to read my notes out loud and then mutter to myself. It sounds weird to anyone listening, but it helps me to concentrate."

"See this bit of hair sticking out straight?" asked one attractive student as she pointed to the offending curl. "Well, when I study I just

have to twist my finger in that and turn it round and round—it's almost as if I were winding up my brain. I'll be glad when exams are over and I can train it to stay down again!"

"How can you possibly study with that radio blaring away?"

The unceasing song and patter of a desk radio would prove utterly distracting to parents. But apparently it is a boon to some of the younger generation during study hours.

"It helps a lot," many teenagers say. "It shuts out sounds from the rest of the house."

"Yes, I like the radio going," admitted Bill. "I feel I can mutter to myself if I like. I don't disturb the family because my monotone blends in with the radio."

Still others, like Eunice, need complete silence to concentrate. "I even ask the family to turn off the TV in the living room," she admitted, "but that's only if I'm trying to learn a very difficult formula or proposition."

GRADUALLY it became clear that most successful students set about preparing for exams in a business-like way. A number started only one week ahead, others 2 weeks. For one Grade 11 academic student, it depended on the examinations: for Christmas exams he starts 2 weeks ahead; at Easter, 3 weeks.

Many drew up their own schedules or timetables. "Of course I shift things around as I go along," one of them admitted, "but it helps me to keep on the track if I have a rough schedule. I only do one subject each night because I prefer to stay with one at a time."

The majority study in the evening; but there were some who said they absorbed more in the early morning hours.

"It depends on how much I do the night before," Karen explained. "If I study late at night, I don't study in the morning. But if I'm not able to concentrate and go to bed early, then I set the alarm and put in an hour in the morning."

A few, like Steve, follow a crash program by both early morning and late evening study. "Oh, I know it's not recommended," he hastened to add, "but I can't settle to study far enough ahead of exams so I make up for it this way."

"An hour and a half is my limit," Brenda replied to the question of how long she could study at a stretch. "After that I take a 15-minute break and start again."

"I just keep on," put in Frank. "When I can't take it any longer, I quit for the night."

Keep your notes up-to-date—and legible! Everyone I queried made good use of notes when they were studying. Each one of them said that they read over a few pages and then tried to repeat the important points. One worthwhile addition was a short summary of these notes, jotted down during the first review of each subject. Such notes can be more quickly reviewed the night before the exam.

Now, how do you study? Have you planned your program? No one can do it for you. Play the radio, rub your car, walk about, chew your pencil if you must—as long as it achieves the desired results! ✓

Healthy Feet

by LOUISE PRICE BELL

MANY OF US make the mistake of thinking our feet "hurt" only if we have aching corns or calluses. Actually, neglected feet protest in other forms, and we feel the effects all over our bodies. A continuous foot health program is urged by a national Foot Health Council. The council recommends some simple rules to keep us foot-happy.

Take a daily foot bath in warm, soapy water, followed by a brisk massage of the feet and a dusting with foot powder.

Change your shoes once or twice a day and change stockings at the same time.

Cut toe nails straight across—never shorter than the flesh.

An all-leather shoe with flexible leather sole is the most comfortable and the coolest to wear. Be sure to be correctly fitted at all times.

Wear hose that are the right size; hosiery sizes should be at least a half-inch longer than your longest toe. This makes for longer wear as well as comfort.

Wiggle your toes often to keep your feet limber and to improve circulation.

Avoid wet feet, either from water or perspiration. Wear rubbers when it rains, and soak your feet in warm, soapy water when they perspire.

Examine your feet at frequent intervals to guard against ailments.

If you have corns or calluses that need cutting, consult a chiropodist. Home "foot surgery" often results in infection.

The Foot Health Council points out that cleanliness is a major essential to foot health. Remember, feet are encased in warm, dark shoes from morning till night and germs and fungus naturally thrive in such an atmosphere. Combat foot infections with plenty of soap and water and as many air- and sun-baths as possible. A large number of people suffer from athlete's foot at some time of their lives according to a well-known foot specialist. This foot ailment is not only an industrial hazard, but a problem in locker rooms at pools, in schools, clubs and gymnasiums. If swimmers aren't careful they can pick up germs from the floor over which others, with athlete's foot, have walked. ✓



*I started
feeling cool,
clean,
fresh
early this year*

*Last summer,
that's all Tampax seemed
to be saying
"Feel cool, clean, fresh."
Cool, clean, fresh.
But I hesitated,
I sweltered
through summer.
Now I'm a
Tampax user.
I'm feeling cool, clean,
fresh early this year.
After all, I can bathe now
—wearing Tampax.
I'll swim later.*

Canadian Tampax Corporation Limited,
Barrie, Ontario



**WOULD YOU LIKE
CLEAR SOFT WATER
IN YOUR FARM HOME?**

Saves soap, makes work easier, saves washing-wear on clothes. This free booklet explains how you can get it at very little cost. No obligation. Write for it.

**OSHKOSH FILTER &
SOFTENER CO.
Canada Ltd.
Brandon,
Manitoba**

It's New

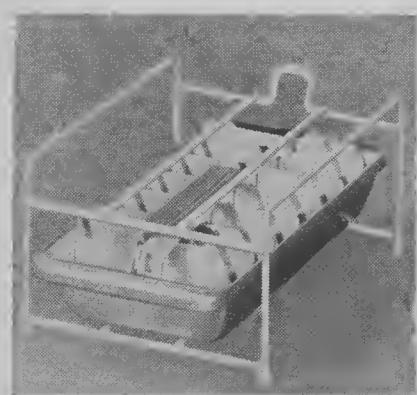
Fine platinum-colored bands and a stainless steel collar trim a clear glass 6-cup dripless teapot. (Corning Glass Works) (H-31) ✓



Decorative plastic laminate is now available in various woodgrain patterns to dress up living room, den or family room. Storage cabinets above feature this new finish. (Arborite Co.) (H-32) ✓



A double spice rack accommodates various sizes and types of spice packages. It is made of vinyl-coated wire. (Grayline Housewares) (H-33) ✓



New ice cube tray stackers come in 2, 3 and 4-tray sizes. They are made of vinyl-coated wire and permit efficient use of refrigerator and freezer space. Trays stack without sticking. (Grayline Housewares) (H-34) ✓



A new construction material suitable for kitchen counters, walls, sills or table tops encases marble fragments or attractive stones. It can be custom molded or cut on the job. (Lusterock International) (H-35) ✓

Now available for both men and women are shoes made of Corfam, a new water-repellent material that can breathe. (Du Pont of Canada) (H-36) ✓



For information about any item mentioned in this column, write to *It's New, Home and Family, Country Guide*, 1760 Ellice Ave., Winnipeg 21, Man., giving the key number at the end of each item as—(H-24).

A Portrait of FUTURE HAPPINESS for You

... In A BEAVER MANUFACTURED HOME!



Read How Easy It Is to Own A BEAVER MANUFACTURED HOME

Now, within days, you too, can be living in a BEAVER MANUFACTURED HOME! Years of research and planning, by specially trained personnel, have produced a fine new series of homes for Canadians—BEAVER MANUFACTURED HOMES. They offer the newest ideas in home designs, plus the finest in workmanship and building materials. Modern planning and construction methods assure a precision-built home.

- **MOVE IN WITHIN DAYS**—as soon as your basement and sub-floor are ready. BEAVER will deliver the component parts. One Day is all it takes to have the home completely closed-in, ready for interior and exterior finish. All components are clearly marked to fit quickly into place.
- **A BEAVER FIRST**—we will supply a Construction Supervisor for one day, with every Manufactured Home, to assure proper assembly.
- **MANUFACTURED ROOF TRUSSES**—supplied with heavy steel gusset plates for a strong, rigid, quickly assembled roof.
- **FACTORY-ASSEMBLED DOOR AND WINDOW UNITS**—just nail into place . . . saves time and labor.
- **EVERY BEAVER MANUFACTURED HOME is a complete home package**—includes basement beam and posts, basement stairs and all material above the foundation. Materials such as kitchen cabinets, paint, furnace, plumbing fixtures, wiring, broadloom, floor tile, etc., are optional. They are available in your choice of color and design from BEAVER LUMBER. Everything can be included on the BEAVER 15-year mortgage plan.
- **10 MODELS TO CHOOSE FROM**—new exciting plans for your family's future happiness. 2- and 3-bedroom models, ranging in size from 768 sq. ft. to 1,172 sq. ft.
- **FREE FULL-COLOR BROCHURE**—contains complete information and designs for BEAVER MANUFACTURED HOMES. Clip and mail the coupon to the BEAVER office nearest you today!

Please Rush My FREE Copy of the All-New
BEAVER MANUFACTURED HOMES Brochure

NAME _____

ADDRESS _____

TELEPHONE _____

Not available in Eastern Ontario, Quebec or the Maritimes

CG-1



BEAVER LUMBER
COMPANY LIMITED

BOX 813,
WINNIPEG, MAN.

BOX 770,
REGINA, SASK.

BOX 607,
EDMONTON, ALTA.

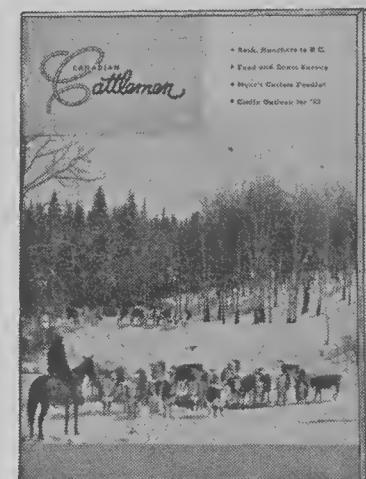
BOX 248, NORTH SURREY, B.C.

the monthly
magazine for
beef producers

If you raise beef for market, you should read each issue of Canada's only publication for the commercial cattleman. It brings you up-to-date information on new methods to get your stock to market at greater profit.

- FEEDING
- ANIMAL HEALTH
- PASTURAGE
- HAY-CROPPING
- MARKET FORECAST

Use this handy form to send in your subscription, now.



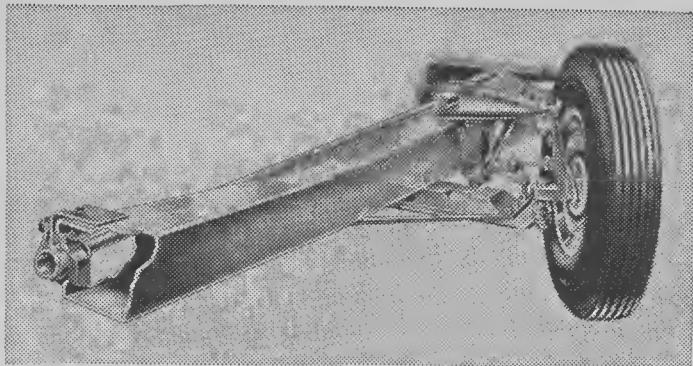
CANADIAN CATTLEMEN
1760 Ellice Ave., Winnipeg 21, Man.

I am enclosing \$2.00 for one year subscription; \$3.00 for 2 years; \$4.00 for 3 years; \$5.00 for 4 years.

NAME _____
(please print)

ADDRESS _____

Here's the secret



With new torsion bar suspension each front wheel is suspended individually and connected to a torsion bar spring. Wheels rise and fall independently without jarring the cab. Shock absorbers and foam cushioned seat add to smooth riding comfort.

of new Velvet Smooth Ride

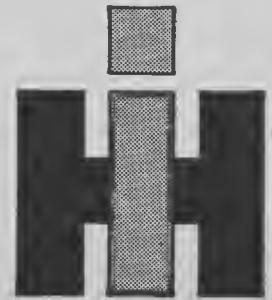


Five minutes behind the wheel and you'll know why we call it the Velvet Smooth Ride! No doubt about it, the new D-1000 is the pickup for *people*—as well as for man-sized loads! Smart new styling inside and out will keep them up-to-date for years to come. And they're built with big truck quality to stand the gaff of the toughest job. Fully boxed frame is

more rigid to hold power train in perfect alignment. If you carry even heavier or longer loads, choose one of the larger International pickups with super-strong yet soft-riding leaf springs. Whatever your job, there's an International pickup to match—plus panels, Travelalls and Travelettes too. Come in today and get all the facts.

New
INTERNATIONAL TRUCKS

International Harvester Company of Canada, Limited



News Highlights

(Continued from page 19)

visiting Japan, has improved the nutritional value of rapeseed meal so that it has become a valuable protein supplement comparing with soybean meal.

City people think farmers work harder, are friendlier, have better business sense, but make less money and on the whole are better citizens than city people themselves are. This surprising information comes from a recent survey made by the CBC.

Three quarters of Ontario's 1,000 broiler growers went to the polls to vote overwhelmingly in favor of establishing a marketing board to set marketing quotas and promote sales.

Agriculture will have the largest single exhibit area at Expo '67 in Montreal. It will cover 9 acres, cost an estimated \$5.5 million and be designed to tell how "man the provider" is coping with the twin problems of food and the population explosion in the world. It is called the most extensive explanation ever attempted of the problems and potential of world agriculture.

Another integrated poultry operation has failed. "Eggarama," which operated in the United States, was backed by business and professional men, and had skilled management, couldn't cope with a free market. Reports are that it produced eggs at a cost of 25 to 26 cents a dozen but had to sell at 22 to 29 cents.

Family farms will survive the present agricultural revolution. This is the view of the governor of the Farm Credit Administration in the United States. He predicts that by 1980 there'll be about as many (1 million) commercial farms in the United States as there are today, and that a lion's share of these will continue to be family operated.

Wood production in Canada fell another 4.2 per cent last year to a level 20 per cent lower than that of 1959.

The barley beef boom in Britain has been such a success that it has started to kill itself because of a shortage of beef cattle, a professor in Scotland has stated.

The constant war on the cattle warble fly will see new tactics if research presently underway at the Lethbridge Research Station proves successful. The plan is to sterilize such a high proportion of the male warble flies that few eggs will be fertilized and the fly population will disappear because it is unable to reproduce itself.

Agriculture Minister Harry Hays says his new program of federal prize money grants for Canada's major farm fairs and exhibitions has stirred up more interest in Canadian livestock circles than anything in recent farm history. He says its purpose is to restore the emphasis on utility in purebred livestock competition. He predicts that it will reduce the cost of exhibiting livestock, encourage more breeders to exhibit, and increase spectator interest. The

new program calls for an inter-breed best udder class for dairy cows. It also reduces the number of classes. For those fairs that adopt the schedules suggested, the Department of Agriculture will match prize money dollar for dollar within stipulated limits, starting with the new exhibition season.

Hog producers in Virginia have initiated a new selling system which is now being tried out in Wisconsin as well. Under the system, called Tel-O-Auction Marketing, hogs are brought by producers to conveniently located points where they are pooled into large attractive lots of uniform weight and grade. Then a simultaneous telephone conference is held with interested packer buyers with the hogs being sold to the highest bidder. Farmers pay 50 cents per hog for the service.

A new rat control product, "Raticate," is being tried out in Canada. Rat control officials in areas with rat eradication programs expect it to be especially useful in special situations such as garbage dumps and grain warehouses where a heavy infestation can build up quickly and where rapid control is needed. It is a selective poison and is rated as non-toxic to farm animals, pets and humans. □

NEW DAIRY POLICY

Agricultural Minister Harry Hays has unveiled his new double-barreled dairy policy, an interim one which will provide for a subsidy of about \$20 million to bring producers of manufactured milk \$3.50 per cwt. and which will see a Canadian Dairy Commission established in the months ahead.

Three methods of support are included in the price policy which goes into effect May 1:

—A continued butter support of 64 cents a lb.

—A deficiency payment to raise the average price of manufactured milk to the farmer to \$3.30. As a safeguard against overproduction, any costs of exporting surplus will be deducted from the deficiency fund.

—A supplementary payment to raise the average price to \$3.50.

Limits are set on the amount of milk from any farm upon which payments can be made. □

INVESTIGATE FAME

On March 11 Premier John Robarts of Ontario reviewed the FAME situation in the Provincial Legislature. He quoted from his letter to the president of FAME, Melvin Becker of Ayr, Ont., "After due consideration of resolutions of the shareholders of FAME, and other submissions, it has been decided to conduct a full investigation."

"Any decision about the possibility of this province guaranteeing a bank loan would, of course, have to await the completion of this investigation."

The loan to which Mr. Robarts refers is a request by FAME for \$2.5 million from the government.

(Please turn overleaf)

Why clad farm buildings with painted metal?

Let's look beyond the fact that painted metal on farm buildings makes them look better, more attractive . . . colourful. Let's look beyond price . . . to value!

Wise farmers, for years, have agreed that no other cladding is as satisfactory, as long-lasting, as safe as metal . . . galvanized steel or aluminum . . . for farm buildings. Over the years maintenance is minimum, no other material so completely combines metal's high resistance to weather; the deep-freeze of winter, the searing heat of summer, driving snow or rain . . . and the hazard of fire. Snugly built buildings, clad with metal, drain faster, don't rot or warp.

Now, to the proven service life of metal we've added another ingredient . . . baked enamel . . . to add extra maintenance-free years of life to farm buildings. This enamel finish comes in a choice of

six attractive colours. During the application and baking process it is literally bonded to the metal, completely covering it with a protective seal. It is a hard paint finish, like the one on your car, stands up to any weather. It won't check, chip, blister or peel.

To learn more about this extra-value cladding, ask your local dealer for information on — WESTEEL "COLORITE" finished roofing and siding or send the coupon below to our nearest office for colourful folder on this modern building material.

WESTEEL
ALL-CANADIAN CANADA-WIDE

Plants and Offices:
WINNIPEG REGINA SASKATOON CALGARY
EDMONTON VANCOUVER TORONTO MONTREAL
Sales Offices at:
London, Ottawa, Quebec, St. John, Halifax



Send for colourful free

folder on "COLORITE"

Finished WESTEEL Metal

Roofing and Siding

Please send complete information to:

Name

Address

City

Province



Long Distance Magic
keeps you close to those you love!

Distance disappears when you call Long Distance! You feel so close to your loved ones as you talk. Just the sound of your voice brings instant joy, comfort, reassurance, love! Don't worry or wonder—visit often by Long Distance.



SAVE—CALL BY NUMBER, STATION-TO-STATION, NIGHTS AFTER 6 OR ALL DAY SUNDAY

News Highlights

The investigation will be an inquiry into FAME made under provisions of the Public Inquiries Act, and conducted by Judge Campbell Grant. Judge Grant "will have the power of summoning any persons and requiring them to give evidence on oath and produce such documents and things as he deems requisite for full investigation. In addition, all government departments, boards, commissions, agencies and committees will assist to the fullest extent."

These are the main areas of FAME's operations with which the inquiry will be concerned:

- The raising and disposition of monies.
- The acquisition of property and the conduct of FAME operations.
- Whether the provisions of the Corporations Act have been contravened.
- The relation of FAME to the farming community and farm organizations.



Cuts a swath through crops and costs with power by 30-hp WISCONSIN

Here's top windrowing at a likeable low price for medium acreage farmers. Just start the 30-hp VH4D on the self-propelled swather and sail through tough-cutting hays and grasses, grain crops, sorghum, soybeans, flax — or whatever needs swathing and windrowing. Why tie-up a \$10,000 tractor and burn up time and money lugging a pull-type PTO swather?

The VH4D is an even-firing air-cooled V-4 that keeps you in the field until the job is done. It has the guts at slow speed to ease through the toughest cutting

without stalling. And it's the best-protected engine going against heat, dust, heavy loads, and hilly terrain. Never a thought about water, boil-outs, or rusty and corroded radiators to bog you down. No air-intake stack either. Just add fuel, and keep the oil level and the air cleaner clean. What other engine can do so much with so little field care?

Go air-cooled modern and save — with equipment powered by dependable air-cooled Wisconsins, 3 to 60.5 hp. Send for Bulletin S-324.

Sales and Service In Canada Supplied By These Distributors and Their Service Stations

CONSOLIDATED ENGS. & MACHY. CO., LTD.
New Toronto, Ont.—Montreal, Que.—Moncton, N.B.
Distributor for Ontario (less Western Lakehead area), Quebec and New Brunswick

CONSTRUCTION EQUIPMENT CO., LTD.,
Halifax, N.S.
Distributor for Nova Scotia and Prince Edward Island

PACIFIC ENGINES & EQUIPMENT, LTD. 40 E. Cordova St., Vancouver 4, B.C., Distributor for British Columbia

WISCONSIN MOTOR CORPORATION
MILWAUKEE, WISCONSIN 53246
World's Largest Builder of Heavy-Duty Air-Cooled Engines — 3 to 60.5 hp

MUMFORD, MEDLAND, LIMITED

HEAD OFFICE: 576 WALL ST., WINNIPEG 10, MAN.
Offices also at: Calgary, Edmonton, Regina, Saskatoon
Please send me full information on the Wisconsin Engine, and the
name and address of the nearest Wisconsin dealer.
NAME..... ADDRESS.....
CITY..... PROV.....

HOG TELETYPE WINS SUPPORT

Five weeks after the opening of Manitoba's voluntary teletype hog selling system, it was beginning to look as if one of the most controversial issues in the province — that of hog marketing — was being solved. Hardly a murmur of complaint arose against the new system. The province's farmers continued to send over 60 per cent of their hogs through it rather than sending them direct to packers. The auction was holding prices up to within \$2 of Toronto prices compared to \$3 or \$4 before the start of the auction.



Orv Anderson

Farmers were expressing delight with the system. Orv Anderson, one of the province's biggest hogmen who feeds and markets about 1,200 hogs a year at Morris, is one of the most enthusiastic. He is a member of the Hog Commission. He recalls that he was skeptical about the idea when asked to serve on the Commission, but he did it out of a sense of duty. He explained, "I thought I knew all there was to know about selling hogs. I was shipping direct to packers and getting all the special deals that were going. But now that I have seen this teletype work, I know I was just fooling myself. This is the answer to selling. It costs us 30 cents per hog for this teletype, but it has paid for itself many times over in the few weeks it has been in operation. It is cutting marketing costs, and putting more money in our pockets."

Jack Harcus, another farmer member of the Commission, markets about 200 hogs. He couldn't agree more with Anderson. He says hogs are being sold to much better advantage under the new system and farmers are reaping the benefits.



Jack Harcus

Reaction from packers continued to be good as well. Although most of them preferred to wait a little longer before committing themselves on the merits of the new system, and while most squirmed uncomfortably at the higher prices they are paying, all were buying hogs by teletype and giving full co-operation to the Hog Commission.

M. J. Heney, plant general manager, Burns and Company, one of the province's three big packers, went further — called the teletype

A New FREE BOOK for

MEN PAST 40

Troubled With Getting Up Nights,
Pains in Back, Hips, Legs,
Nervousness, Tiredness.

If you are a victim of the above symptoms, the trouble may be traceable to Glandular Inflammation... a condition that very commonly occurs in men of middle age or past and is often accompanied by dependency, emotional upset and other mental reactions.

Although many people mistakenly think surgery is the only answer to Glandular Inflammation, there is now a non-surgical time-tested treatment available.

Non-Surgical Treatments

This New Free Illustrated BOOK tells about the modern, mild, Non-Surgical treatment for Glandular Inflammation and that the treatment is backed by a Lifetime Certificate of Assurance. Many men from all over the country have taken the NON-SURGICAL treatment and have reported it has proven effective.

The Non-Surgical treatment described in this book requires no painful surgery, hospitalization or long period of convalescence. Treatment takes but a short time and the cost is reasonable.

NEW FREE BOOK

Receiving this book may enable you to better enjoy the future years of your life and prove to be one of the best investments you ever made.

Excelsior Medical Clinic
Dept. M 8771 Excelsior Springs, Mo.

WORN TO A FRAZZLE?



Has your former "dazzle" changed to "frazzle", because of a rundown condition? If so, the tonic benefits of Dr. Chase Nerve Food could help you. This time-tested remedy provides beneficial iron and other essential ingredients which improve your blood and, thus, help fight fatigue. So, if the "dazzle" has gone out of your life, start taking Dr. Chase Nerve Food. It has stood the tests of time and experience... ask your druggist.

Dr. Chase
NERVE FOOD
INDEPENDENT FORMULA
SODIUM PYROPHOSPHATE
HELPS FIGHT FATIGUE

Renew your Country Guide subscription early. It pays to plan ahead.

FALSE TEETH

That Loosen
Need Not Embarrass

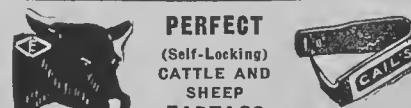
Many wearers of false teeth have suffered real embarrassment because their plate dropped, slipped or wobbled at just the wrong time. Do not live in fear of this happening to you. Just sprinkle a little FASTEETH, the alkaline (non-acid) powder, on your plates. Holds false teeth more firmly, so they feel more comfortable. Does not sour. Checks "plate odor" (denture breath). Get FASTEETH at drug counters everywhere.

FREE

80-page Leathercraft Catalogue

Write today to

TANDY LEATHER COMPANY
Box 340, Dept. AD, Barrie, Ont.



PERFECT
(Self-Locking)
CATTLE AND
SHEEP
EARTAGS

Manitoba Stencil and Stamp Works Ltd.
"CAIL'S.", 494½ MAIN ST., WINNIPEG

one of the best developments to take place in the swine industry in years. "If it gets the full support of producers, it could eliminate a costly system of soliciting hogs," he said.

Heney placed himself squarely on record as supporting the new system. "It's a cheaper and a better marketing system than the old one." He has ceased altogether to solicit hogs in the country for direct shipment to his plant although he continues to

accept direct deliveries. He hastens to add that if he has to start soliciting in the country again to assure himself of enough hogs, he will. But he prefers to buy hogs over the teletype even though this means he must compete in price with every other buyer.

Heney makes another point too. "One reason Manitoba farmers haven't produced more hogs is because they didn't have confidence in

the marketing system. They can have confidence in this system in which buyers have a chance to bid on all the hogs they want. It should result in an expanding swine industry."

Despite criticism of the new scheme throughout the province as it was being developed and before it went into operation, not a word of protest against it had been heard on the floor of the legislature at time

of writing. A month after the teletype started, Minister of Agriculture George Hutton led a delegation of 20 MLA's to the Winnipeg Stockyards to see the system in operation.

Meanwhile, farm leaders across the country watched closely to see if this could be a lead for future farm marketing programs. Within days of the teletype's opening, officials from other provinces, both east and west, which lacked legislation



your most important crop:

money

And your money needs the same careful tillage that you give your land. That's why you should team up with your Royal Bank manager. His financial skills work hand-in-hand with your own farm management skills. Out of this combination comes growth: **your** growth in security and success.

You may be seeking short-term operating capital. You may want to plan and finance a long-term modernization and expansion. You may want advice on a savings program. You may only want to buy a set of new kitchen appliances for your wife.

Whatever your goal, your Royal Bank manager would like to help you get there. His advice is experienced, confidential—and entirely without obligation. (And he frequently can show you how to save money on financing costs...and how to make more intelligent use of your credit.) Why not talk it over with him soon?



ROYAL BANK

of the kind in Manitoba, were asking searching questions about it. A delegation representing the Quebec Marketing Board journeyed to Winnipeg to inspect the hog teletype first hand. Observers came from other provinces as well.

With this kind of interest in Manitoba's experiment, it is apparent that the weeks ahead are important ones for it, and for the swine industry.—D.R.B. V

Stop baby pig scours



Scour-ade® Suspension saves almost 100% of litters infected with white scours (bacterial enteritis). Acts so fast, results are seen within 24 hours. Prevents losses from mortality and stunting.

Scour-ade Suspension is economical, palatable, and easy to use. Oral dispenser automatically measures correct dose. Packed in 30 dose, litter size. Cost — only 12c a dose.

Stop your losses from white scours in baby pigs. Get powerful, proven, quick-acting Scour-ade Suspension from your feed or drug store.

® Reg'd T.M.

A product of VIOBIN (Canada) Limited, St. Thomas, Ontario

FARMERS BUY PACKING PLANT

Ontario's farmer-owned First Cooperative Packers (COPACO) at Barrie, has purchased the Whyte Packing Company at Stratford, Ont. It took over the management of the plant in late March. COPACO is making its expansion move from a strong base. It processes 25 million lb. of edible meat products annually, and with the acquisition of the Stratford plant, expects to double this

volume. General Manager James Simpson of the co-op says that the Whyte Packing Plant, which has been rumored to be in financial trouble for some time, has developed an excellent export market to the United States for provision products. It is the intention of the co-op, he says, "to develop this further, since the export trade is the one single program that can mean more to the economy of livestock producers than anything else." V

much bedding. You save a pile of straw."

"That's how it is with my old stanchion barn," he nodded. "Every week or so I toss a bale into each stall. The manure falls into the alley where I can easily scoop it up. My Granddaddy planned it that way when he built the barn in 1893."

"You think you're smart," I growled, "when all you are is lazy. This set-up is entirely different. Here, your cows are free to move around. The trouble with guys like you is that you refuse to move with the times. A farmer who won't keep up with the times is bound to lose the race."

"That's what my Pa was always talking about — the race," he complained. "Who says there's gotta be a race? Seems to me all that happens in a race is some contestants start at one point, run like crazy for awhile and end at the same place. In fact, at the last race I went to the lead horse blew a gasket and collapsed."

"But the one which makes it gets a prize," I added, "don't you forget that?"

"Well, sir, I hope you win," he said cheerfully. "When you get that prize I'd advise you to put it into a tower silo. I hear they're also coming back in style. A few more years of progress and I'll have a modern farm without having to lift a tool."

I must say these things appear to go in cycles but I'd never admit this to Ted.

Sincerely,
PETE WILLIAMS.



Hi FOLKS:

Every time I make changes in my dairy set-up, Ted Corbett comes over to see what's going on. And he's generally pretty liberal with his remarks. Last week, he caught me in the act of putting free stalls in my loose-housing barn.

"If I didn't know you were one of these here modern, up-to-date farmers I'd swear you were converting back to stanchions," he said, looking as innocent as could be.

"An entirely different deal," I told him curtly. "This idea combines the very best features of both systems. Because there is no manure pack your cows stay clean, and because they stay clean they don't ruin so



FIR PLYWOOD'S STRENGTH IS HELPING THIS MAN BUILD A MORE PROFITABLE FARM

He knows that Fir Plywood's unique bracing power locks the framework into a single, draught-free structure . . . that plywood remains unaffected by urine, manure and silage acid . . . that it reduces condensation and will not corrode. This man knows that Fir Plywood farm buildings are a sound investment in future profits.

Why Fir Plywood? Because only plywood made from giant Fir logs has the long-fibred toughness and strength that stands up to rough treatment year after year!

Waterproof Glue
FIR PLYWOOD

Fir Plywood marked **PMBC EXTERIOR** has Waterproof Glue
Plywood Manufacturers Association of B.C., Vancouver, B.C.

Washday Wiles

THERE'S A ROSIER hue to washday blues with today's soaps, detergents, bleaches and starches. There's also a whiter look to the laundry.

Soap

Soaps are still made by the action of alkali on fat or fatty acids. Finer than they were in grandmother's day, they come in both flake and liquid form. You can also buy laundry soap in bar and granular form.

Detergents

Detergents were once known as soapless soaps. They are made from a variety of materials developed from fatty acids, petroleum and such. They come in both granular or liquid form; and they're also available in pre-measured tablets.

Read the labels carefully when you buy cleansing products to find out if you are buying a soap or a detergent, how to use the product successfully, and to determine whether or not it contains bleach.

Use a light-duty product for slightly soiled laundry, a heavy-duty one for the dirtier pieces.

Types of Bleach

Bleach, of course, is never a substitute for good laundering. It is added to the wash water to remove some stains or perhaps keep some fabrics from yellowing. Caution is the word here: do read the directions for using bleach most carefully, particularly the directions for diluting it. It is also important to rinse laundry well after bleaching.

There are two types of bleach—chlorine and oxygen. Chlorine bleaches come in liquid, bead, powder or crystal forms. Dilute as directed. Chlorine bleaches should never be used on wool, silk, spandex, some wash-and-wear fabrics, and non-fast color fabrics. Nor should they be used in hard water.

Oxygen bleaches do not work as quickly as the chlorine ones. Usually they can be safely used for all types of fibers, finishes and most colors. A perborate (a mild oxygen bleach) is good for light stains and soil. Monopersulfates have medium bleaching power. Oxygen bleaches come in dry form in packages, in pre-measured tablets and water-soluble packets.

Variety in Starches

Starches give "body" to fabrics. Use heavy starch for shirt collars and cuffs and children's dresses; light starch for synthetics, sheer rayons, cottons, curtains and lace. The rule: follow the directions on the label.

Vegetable starches have three forms. Dry lump or cube starch, mixed with cold water and then diluted with boiling water; concentrated liquid starch which must be diluted; and "instant" pre-cooked flakes or liquid which is readily soluble in cold water.

Synthetic starches come in two types: one, a soluble plastic material applied after each washing; the other, known as durable starch, must be diluted and lasts through several washings. Since it won't rinse out, it's important to use it with care.

There are also easy-to-apply spray starches in either a ready-to-use vegetable type or the plastic product. Apply these before or as you iron. V

A family can live with

fascinaire

EMBOSSSED
INLAID
LINOLEUM



Flagstone, No. 8759



Mosaic, No. 8752



Quarry Tile, No. 8754

Now Dominion Fascinaire is thicker, and more comfortable under foot—quieter (softens clatter).

Fascinaire's improved non-glare, textured surface is easy to polish with paste or liquid waxes. Seldom needs waxing anyway.

Fascinaire resists scratches—heel dents spring back quickly, too.

Tough, durable, comfortable, quiet—that's the new Dominion Fascinaire Embossed Inlaid Linoleum by-the-yard. Ask your dealer to show you the full range of up-to-date colour combinations in each pattern—Flagstone, Mosaic, Quarry Tile.

Central Mortgage & Housing Corporation Acceptance No. 653.

CG-6
DOMINION OILCLOTH & LINOLEUM CO.
LIMITED,

2200 St. Catherine Street East,
Montreal 24, Quebec

Please send me illustrated colour folder
showing full range of Fascinaire Embossed
Inlaid Linoleum.

Name.....

Address.....

City.....

NEW  FLOORS BY DOMINION



...tick...tick...tick...tick—fast!

New Holland's low-cost Hayliner 268!



Here's big capacity at a down-to-earth price—the New Holland PTO Hayliner® 268! A "268" ticks off solid, square, tightly-tied bales hour after hour, day after day. ■ Top-quality bales, too, thanks to gentle, leaf-saving Flow-Action® feeding system. With fewer moving parts and no gear box, Flow-Action promises years of no-trouble service! ■ Need a long-tongue baler? See the new Hayliner 269. ■ New Holland Machine Company (Canada) Limited
Ottawa, Winnipeg, Regina and Calgary.

NEW HOLLAND
"First in Grassland Farming"